



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 177145

TO: David Lukton
Location: REM/3B75/3C18
Art Unit: 1654
_____, 2006

Case Serial Number: 10/626719

From: P. Sheppard
Location: Remsen Building
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sheppard@uspto.gov

Search Notes

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248

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SEARCH REQUEST FORM
(STIC)

Requestor's Name: David Lukton Examiner number: 71263 Date: 1-20-06

Art Unit: 1654 Phone number: 571-272-0952 Serial Number: 10-626719

Mail Box: 3-C-18 Examiner Rm: 3-B-75 Results format: paper

Title: SHORT-WARP PEPTIDE DYE CONJUGATE AS CONTRAST AGENT
FOR OPTICAL DIAGNOSTIC

Applicants: LICHA, KAI; BECKER, ANDREAS; SEMMLER,
WOLFHARD; WIEDENMANN, BERTRAM; HESSENIUS, CARSTEN;
VOLKMER-ENGERT, RUDOLF; SCHNEIDER-MERGNER, JENS

Earliest priority date: 4/9/99

Please search SEQ ID NOS: 1 - 8

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-1

Perfect score: 150

Sequence: 1 HWDVFTDNYTRLRKQMAVKYKLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

A_Geneseq_21:*

1: Geneseqp1980s:*

2: Geneseqp1990s:*

3: Geneseqp2000s:*

4: Geneseqp2001s:*

5: Geneseqp2002s:*

6: Geneseqp2003as:*

7: Geneseqp2003bs:*

8: Geneseqp2004s:*

9: Geneseqp2005s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	150	100.0	28	5	ADH68789
2	141	94.0	28	5	ADH68790
3	140	93.3	28	5	ADH68781
4	138	92.0	28	5	ADH68785
5	137	91.3	28	5	ADH68787
6	137	91.3	28	5	ADH68784
7	137	91.3	28	5	ADH68782
8	137	91.3	28	5	ADH68786
9	136	90.7	28	1	AAFP10172
10	136	90.7	28	1	AAFP1039
11	136	90.7	28	2	AAAR34943
12	136	90.7	28	2	AAAR40272
13	136	90.7	28	2	AAAR53111
14	136	90.7	28	2	AAAR53109
15	136	90.7	28	2	AAAR53110
16	136	90.7	28	2	AAAR87092
17	136	90.7	28	2	AAAR83785
18	136	90.7	28	2	AAAR97810
19	136	90.7	28	2	AAAR93023
20	136	90.7	28	2	AAW65188
21	136	90.7	28	2	AAW06120
22	136	90.7	28	2	AAW06119
23	136	90.7	28	2	AAW06114
24	136	90.7	28	2	AAW06113

25	136	90.7	28	2	AAW06121	Aaw06121 Pig VIP p
26	136	90.7	28	2	AAW06122	Aaw06122 Goat VIP
27	136	90.7	28	2	AAW06115	Aaw06115 Dog VIP p
28	136	90.7	28	2	AAW06112	Aaw06112 Sheep VIP
29	136	90.7	28	2	AAW37791	Aaw37791 Vasoactiv
30	136	90.7	28	2	AAW71677	Aaw71677 Vasoactiv
31	136	90.7	28	2	AAAY30769	Aay30769 Vasoactiv
32	136	90.7	28	2	AAAY44196	Aay44196 Human vas
33	136	90.7	28	3	AAAY94560	Aay94560 Vasoactiv
34	136	90.7	28	4	AAAB85707	AAb85707 Peptide h
35	136	90.7	28	4	AAAB85710	AAb85710 Peptide h
36	136	90.7	28	4	AAAB91279	AAb91279 Vasoactiv
37	136	90.7	28	4	AAAB91278	AAb91278 Vasoactiv
38	136	90.7	28	4	AAAB12028	AAe12028 Porcine v
39	136	90.7	28	4	AAAB37111	AAb37111 Human vas
40	136	90.7	28	4	AAAG70459	AAg70459 Vasoactiv
41	136	90.7	28	4	AAAB50845	AAb50845 Human pro
42	136	90.7	28	4	AAAU09653	AAu09653 Porcine i
43	136	90.7	28	4	AAAB45614	AAb45614 Native va
44	136	90.7	28	5	AAAE19604	AAe19604 Human ste
45	136	90.7	28	5	AAAE19627	AAe19627 Human vas

ALIGNMENTS

RESULT 1

ADH68789	ID	ADH68789	standard; peptide; 28 AA.
XX	AC	ADH68789;	
XX	DT	25-MAR-2004 (first entry)	
XX	DE	Synthetic VIP analogue #96.	
XX	KW	conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;	
KW	KW	tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;	
KW	KW	bladder; cervix.	
XX	OS	Synthetic.	
XX	FN	EP1170021-A2.	
XX	XX	09-JAN-2002.	
XX	PD		
XX	PF	14-MAY-2001; 2001EP-00250164.	
XX	PR	15-MAY-2000; 2000US-00571407.	
XX	XX	(SCHD) SCHERING AG.	
XX	PA	Bauer M, Becker A, Licha K, Bornhop D, Platzek J;	
XX	PI	WPI; 2002-099222/14.	
XX	DR	New peptide-lanthanide chelate conjugates, useful in optical or	
XX	PT	fluorescence methods for diagnosis of diseased tissue, e.g. tumors or	
PT	PT	inflammation.	
XX	XX	Claim 21; SEQ ID NO 99; 97pp; German.	
XX	XX	This invention describes novel conjugates of vasoactive intestinal	
XX	CC	peptide (VIP), somatostatin, neurotensin or related peptides with	
XX	CC	polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.	
XX	CC	Preparation of the conjugates involves preparing a metal complex, then	
XX	CC	coupling the product with a peptide by aminolysis of a corresponding	
XX	CC	active ester. The conjugates can be administered topically or	
XX	CC	intravenously. The use of the conjugates of the invention are claimed for	
XX	CC	in-vivo diagnosis of tumours, other diseased tissue regions or adenomas	
XX	CC	by an optical detection method or for in vivo fluorescence diagnosis of	
XX	CC	tumours, tumour cells and/or inflamed tissue by an endoscopic method in	
XX	CC	the gastrointestinal tract, oesophagus, bronchial tract, bladder or	

CC cervix. The claims also cover (i) a method of endoscopic in-vivo
 CC fluorescence diagnosis, involving applying the conjugates topically by
 CC spraying in the gastrointestinal tract, oesophagus or bladder or by
 CC inhalation to the bronchi, optionally removing non-bonded excess
 CC conjugates by washing and carrying out the endoscopic investigation by
 CC local excitation at a wavelength of 250-450 nm and local detection of the
 CC specific fluorescent radiation emitted by the conjugates and (ii) an
 CC optical diagnostic composition for in vivo diagnosis of diseased tissue
 CC regions, comprising at least one compound conjugated together with
 CC conventional auxiliaries, carriers and/or diluents. The conjugate is also
 CC enriched in the lymph nodes on intravenous administration, and can thus
 CC be used to facilitate identification of the lymph nodes (by fluorescence)
 CC during surgery. The conjugate is selectively enriched in diseased tissue
 CC and after excitation with light of a suitable wavelength provides long-
 CC lasting fluorescence (specifically having a life in the millisecond
 CC range) in the 480-600 nm wavelength region (in which the human eye is
 CC most sensitive), the life of the fluorescence of the conjugate exceeding
 CC that of the autofluorescence of the tissue. The endoscopic diagnosis of
 CC surface tumours is thus facilitated. The conjugates can be applied
 CC topically, e.g. by spraying. ADH6891-ADH68931 represent peptide
 CC conjugates described in the disclosure of the invention.

XX Sequence 28 AA;

Query Match 100.0%; Score 150; DB 5; Length 28;
 Best Local Similarity 100.0%; Pred. No. 2.2e-12;
 Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTRLRKQMAVKYLSILN 28
 DB 1 HWDVFTDNYTRLRKQMAVKYLSILN 28

RESULT 2

ADH68790
 ID ADH68790 standard; peptide; 28 AA.

AC ADH68790;

DT 25-MAR-2004 (first entry)

DE Synthetic VIP analogue #97.

KW conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;
 KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;
 KW bladder; cervix.

OS Synthetic.

PN EP1170021-A2.

PD 09-JAN-2002.

PF 14-MAY-2001; 2001EP-00250164.

PR 15-MAY-2000; 2000US-00571407.

XX (SCHD) SCHERING AG.

PI Bauer M, Becker A, Licha K, Bornhop D, Platzek J;

XX WPI; 2002-099222/14.

PT New peptide-lanthanide chelate conjugates, useful in optical or
 PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or
 PT inflammation.

PS Claim 21; SEQ ID NO 100; 97pp; German.

CC This invention describes novel conjugates of vasoactive intestinal
 CC peptide (VIP), somatostatin, neurotensin or related peptides with
 CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.
 CC Preparation of the conjugates involves preparing a metal complex, then

CC coupling the product with a peptide by aminolysis of a corresponding
 CC active ester. The conjugates can be administered topically or
 CC intravenously. The use of the conjugates of the invention are claimed for
 CC in-vivo diagnosis of tumours, other diseased tissue regions or adenomas
 CC by an optical detection method or for in vivo fluorescence diagnosis of
 CC tumours, tumour cells and/or inflamed tissue by an endoscopic method in
 CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or
 CC cervix. The claims also cover (i) a method of endoscopic in-vivo
 CC fluorescence diagnosis, involving applying the conjugates topically by
 CC spraying in the gastrointestinal tract, oesophagus or bladder or by
 CC inhalation to the bronchi, optionally removing non-bonded excess
 CC conjugates by washing and carrying out the endoscopic investigation by
 CC local excitation at a wavelength of 250-450 nm and local detection of the
 CC specific fluorescent radiation emitted by the conjugates and (ii) an
 CC optical diagnostic composition for in vivo diagnosis of diseased tissue
 CC regions, comprising at least one compound conjugated together with
 CC conventional auxiliaries, carriers and/or diluents. The conjugate is also
 CC enriched in the lymph nodes on intravenous administration, and can thus
 CC be used to facilitate identification of the lymph nodes (by fluorescence)
 CC during surgery. The conjugate is selectively enriched in diseased tissue
 CC and after excitation with light of a suitable wavelength provides long-
 CC lasting fluorescence (specifically having a life in the millisecond
 CC range) in the 480-600 nm wavelength region (in which the human eye is
 CC most sensitive), the life of the fluorescence of the conjugate exceeding
 CC that of the autofluorescence of the tissue. The endoscopic diagnosis of
 CC surface tumours is thus facilitated. The conjugates can be applied
 CC topically, e.g. by spraying. ADH6891-ADH68931 represent peptide
 CC conjugates described in the disclosure of the invention.

XX Sequence 28 AA;

Query Match 94.0%; Score 141; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 3.3e-11;
 Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTRLRKQMAVKYLSILN 28

DB 1 HYDAVFTDNYTRLRKQMAVKYLSILN 28

RESULT 3

ADH68781

ID ADH68781 standard; peptide; 28 AA.

AC ADH68781;

DT 25-MAR-2004 (first entry)

DE Synthetic VIP analogue #88.

KW conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;
 KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;
 KW bladder; cervix.

OS Synthetic.

PN EP1170021-A2.

PD 09-JAN-2002.

PF 14-MAY-2001; 2001EP-00250164.

PR 15-MAY-2000; 2000US-00571407.

XX (SCHD) SCHERING AG.

PI Bauer M, Becker A, Licha K, Bornhop D, Platzek J;

XX WPI; 2002-099222/14.

PT New peptide-lanthanide chelate conjugates, useful in optical or
 PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or
 PT inflammation.

XX PS Claim 21; SEQ ID NO 91; 97pp; German.

XX CC This invention describes novel conjugates of vasoactive intestinal

CC peptide (VIP), somatostatin, neurotensin or related peptides with

CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.

CC Preparation of the conjugates involves preparing a metal complex, then

CC coupling the product with a peptide by aminolysis of a corresponding

CC active ester. The conjugates can be administered topically or

CC intravenously. The use of the conjugates of the invention are claimed for

CC in-vivo diagnosis of tumours, other diseased tissue regions or adenomas

CC by an optical detection method or for in vivo fluorescence diagnosis of

CC tumours, tumour cells and/or inflamed tissue by an endoscopic method in

CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or

CC cervix. The claims also cover (i) a method of endoscopic in-vivo

CC fluorescence diagnosis, involving applying the conjugates topically by

CC spraying in the gastrointestinal tract, oesophagus or bladder or by

CC inhalation to the bronchi, optionally removing non-bonded excess

CC conjugates by washing and carrying out the endoscopic investigation by

CC local excitation at a wavelength of 250-450 nm and local detection of the

CC specific fluorescent radiation emitted by the conjugates and (ii) an

CC optical diagnostic composition for in vivo diagnosis of diseased tissue

CC regions, comprising at least one compound conjugated together with

CC conventional auxiliaries, carriers and/or diluents. The conjugate is also

CC enriched in the lymph nodes on intravenous administration, and can thus

CC be used to facilitate identification of the lymph nodes (by fluorescence)

CC during surgery. The conjugate is selectively enriched in diseased tissue

CC and after excitation with light of a suitable wavelength provides long-

CC lasting fluorescence (specifically having a life in the millisecond

CC range) in the 480-600 nm wavelength region (in which the human eye is

CC most sensitive), the life of the fluorescence of the conjugate exceeding

CC that of the autofluorescence of the tissue. The endoscopic diagnosis of

CC surface tumours is thus facilitated. The conjugates can be applied

CC topically, e.g. by spraying. ADH68691-ADH68931 represent peptide

CC conjugates described in the disclosure of the invention.

XX SQ Sequence 28 AA;

Query Match 93.3%; Score 140; DB 5; Length 28;

Best Local Similarity 96.4%; Pred. No. 4.4e-11;

Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HMDAVFTDNYTLRKQMAVKKYLNSILN 28

Db 1 HFDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 4

ADH68785

ID ADH68785 standard; peptide; 28 AA.

XX AC ADH68785;

XX DT 25-MAR-2004 (first entry)

XX DE Synthetic VIP analogue #92.

XX KW conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;

KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;

KW bladder; cervix.

XX OS Synthetic.

XX PN EP1170021-A2.

XX PD 09-JAN-2002.

XX PF 14-MAY-2001; 2001EP-00250164.

XX PR 15-MAY-2000; 2000US-00571407.

XX PA (SCHD) SCHERING AG.

XX

PI Bauer M, Becker A, Licha K, Bornhop D, Platzek J;

XX WPI; 2002-099222/14.

XX PT New peptide-lanthanide chelate conjugates, useful in optical or

PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or

XX inflammation.

XX Claim 21; SEQ ID NO 95; 97pp; German.

XX CC This invention describes novel conjugates of vasoactive intestinal

CC peptide (VIP), somatostatin, neurotensin or related peptides with

CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.

CC Preparation of the conjugates involves preparing a metal complex, then

CC coupling the product with a peptide by aminolysis of a corresponding

CC active ester. The conjugates can be administered topically or

CC intravenously. The use of the conjugates of the invention are claimed for

CC in-vivo diagnosis of tumours, other diseased tissue regions or adenomas

CC by an optical detection method or for in vivo fluorescence diagnosis of

CC tumours, tumour cells and/or inflamed tissue by an endoscopic method in

CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or

CC cervix. The claims also cover (i) a method of endoscopic in-vivo

CC fluorescence diagnosis, involving applying the conjugates topically by

CC spraying in the gastrointestinal tract, oesophagus or bladder or by

CC inhalation to the bronchi, optionally removing non-bonded excess

CC conjugates by washing and carrying out the endoscopic investigation by

CC local excitation at a wavelength of 250-450 nm and local detection of the

CC specific fluorescent radiation emitted by the conjugates and (ii) an

CC optical diagnostic composition for in vivo diagnosis of diseased tissue

CC regions, comprising at least one compound conjugated together with

CC conventional auxiliaries, carriers and/or diluents. The conjugate is also

CC enriched in the lymph nodes on intravenous administration, and can thus

CC be used to facilitate identification of the lymph nodes (by fluorescence)

CC during surgery. The conjugate is selectively enriched in diseased tissue

CC and after excitation with light of a suitable wavelength provides long-

CC lasting fluorescence (specifically having a life in the millisecond

CC range) in the 480-600 nm wavelength region (in which the human eye is

CC most sensitive), the life of the fluorescence of the conjugate exceeding

CC that of the autofluorescence of the tissue. The endoscopic diagnosis of

CC surface tumours is thus facilitated. The conjugates can be applied

CC topically, e.g. by spraying. ADH68691-ADH68931 represent peptide

CC conjugates described in the disclosure of the invention.

XX SQ Sequence 28 AA;

Query Match 92.0%; Score 138; DB 5; Length 28;

Best Local Similarity 96.4%; Pred. No. 8.1e-11;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HMDAVFTDNYTLRKQMAVKKYLNSILN 28

Db 1 HMDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 5

ADH68787

ID ADH68787 standard; peptide; 28 AA.

XX AC ADH68787;

XX DT 25-MAR-2004 (first entry)

XX DE Synthetic VIP analogue #94.

XX KW conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;

KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;

KW bladder; cervix.

XX OS Synthetic.

XX PN EP1170021-A2.

XX PD 09-JAN-2002.

XX PF 14-MAY-2001; 2001EP-00250164.
XX PR 15-MAY-2000; 2000US-00571407.
XX PA (SCHD) SCHERING AG.
XX PI Bauer M, Becker A, Licha K, Bornhop D, Platzek J;
XX DR WPI; 2002-099222/14.
XX PT New peptide-lanthanide chelate conjugates, useful in optical or
PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or
PT inflammation.
XX PS Claim 21; SEQ ID NO 97; 97pp; German.
XX CC This invention describes novel conjugates of vasoactive intestinal
CC peptide (VIP), somatostatin, neurotensin or related peptides with
CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.
CC Preparation of the conjugates involves preparing a metal complex, then
CC coupling the product with a peptide by aminolysis of a corresponding
CC active ester. The conjugates can be administered topically or
CC intravenously. The use of the conjugates of the invention are claimed for
CC in-vivo diagnosis of tumors, other diseased tissue regions or adenomas
CC by an optical detection method or for in vivo fluorescence diagnosis of
CC tumors, tumour cells and/or inflamed tissue by an endoscopic method in
CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or
CC cervix. The claims also cover (i) a method of endoscopic in-vivo
CC fluorescence diagnosis, involving applying the conjugates topically by
CC spraying in the gastrointestinal tract, oesophagus or bladder or by
CC inhalation to the bronchi, optionally removing non-bonded excess
CC conjugates by washing and carrying out the endoscopic investigation by
CC local excitation at a wavelength of 250-450 nm and local detection of the
CC specific fluorescent radiation emitted by the conjugates and (ii) an
CC optical diagnostic composition for in vivo diagnosis of diseased tissue
CC regions, comprising at least one compound conjugated together with
CC conventional auxiliaries, carriers and/or diluents. The conjugate is also
CC enriched in the lymph nodes on intravenous administration, and can thus
CC be used to facilitate identification of the lymph nodes (by fluorescence)
CC during surgery. The conjugate is selectively enriched in diseased tissue
CC and after excitation with light of a suitable wavelength provides long-
CC lasting fluorescence (specifically having a life in the millisecond
CC range) in the 480-600 nm wavelength region (in which the human eye is
CC most sensitive), the life of the fluorescence of the conjugate exceeding
CC that of the autofluorescence of the tissue. The endoscopic diagnosis of
CC surface tumours is thus facilitated. The conjugates can be applied
CC topically, e.g. by spraying. ADH68691-ADH68931 represent peptide
CC conjugates described in the disclosure of the invention.
XX SQ Sequence 28 AA;
Query Match 91.3%; Score 137; DB 5; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HTDAVFTDNYTLRKQMAVKKYLNSILN 28
RESULT 6
ADH68784
ID ADH68784 standard; peptide; 28 AA.
XX AC ADH68784;
XX DT 25-MAR-2004 (first entry)
XX DE Synthetic VIP analogue #91.
XX KW conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;
KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;

KW bladder; cervix.
XX OS Synthetic.
XX PN EP1170021-A2.
XX PD 09-JAN-2002.
XX PF 14-MAY-2001; 2001EP-00250164.
XX PR 15-MAY-2000; 2000US-00571407.
XX PA (SCHD) SCHERING AG.
XX PI Bauer M, Becker A, Licha K, Bornhop D, Platzek J;
XX DR WPI; 2002-099222/14.
XX PT New peptide-lanthanide chelate conjugates, useful in optical or
PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or
PT inflammation.
XX PS Claim 21; SEQ ID NO 94; 97pp; German.
XX CC This invention describes novel conjugates of vasoactive intestinal
CC peptide (VIP), somatostatin, neurotensin or related peptides with
CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.
CC Preparation of the conjugates involves preparing a metal complex, then
CC coupling the product with a peptide by aminolysis of a corresponding
CC active ester. The conjugates can be administered topically or
CC intravenously. The use of the conjugates of the invention are claimed for
CC in-vivo diagnosis of tumors, other diseased tissue regions or adenomas
CC by an optical detection method or for in vivo fluorescence diagnosis of
CC tumors, tumour cells and/or inflamed tissue by an endoscopic method in
CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or
CC cervix. The claims also cover (i) a method of endoscopic in-vivo
CC fluorescence diagnosis, involving applying the conjugates topically by
CC spraying in the gastrointestinal tract, oesophagus or bladder or by
CC inhalation to the bronchi, optionally removing non-bonded excess
CC conjugates by washing and carrying out the endoscopic investigation by
CC local excitation at a wavelength of 250-450 nm and local detection of the
CC specific fluorescent radiation emitted by the conjugates and (ii) an
CC optical diagnostic composition for in vivo diagnosis of diseased tissue
CC regions, comprising at least one compound conjugated together with
CC conventional auxiliaries, carriers and/or diluents. The conjugate is also
CC enriched in the lymph nodes on intravenous administration, and can thus
CC be used to facilitate identification of the lymph nodes (by fluorescence)
CC during surgery. The conjugate is selectively enriched in diseased tissue
CC and after excitation with light of a suitable wavelength provides long-
CC lasting fluorescence (specifically having a life in the millisecond
CC range) in the 480-600 nm wavelength region (in which the human eye is
CC most sensitive), the life of the fluorescence of the conjugate exceeding
CC that of the autofluorescence of the tissue. The endoscopic diagnosis of
CC surface tumours is thus facilitated. The conjugates can be applied
CC topically, e.g. by spraying. ADH68691-ADH68931 represent peptide
CC conjugates described in the disclosure of the invention.
XX SQ Sequence 28 AA;
Query Match 91.3%; Score 137; DB 5; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HLDVFTDNYTLRKQMAVKKYLNSILN 28
RESULT 7
ADH68782
ID ADH68782 standard; peptide; 28 AA.
XX AC ADH68782;

Query Match 91.3%; Score 137; DB 5; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTRLRKQMAVKKYLNSILN 28
DB 1 HQDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 9
AAP10172
ID AAP10172 standard; peptide; 28 AA.
XX
AC AAP10172;
XX
XX 25-MAR-2003 (revised)
DT 21-DEC-1992 (first entry)
XX
DE VIP.
XX Vasoactive intestinal polypeptide;
KW allergic asthma. chemical mediator isolation-inhibiting action.
XX
XX Homo sapiens.
XX
XX JP56128721-A.
XX
XX 08-OCT-1981.
XX
XX 12-MAR-1980; 80JP-00030308.
XX
XX 12-MAR-1980; 80JP-00030308.
XX
XX (EISA) EISAI CO LTD.
XX
XX WPI; 1981-86052D/47.
XX
XX Antiallergic agent comprises peptide - contg. 28 amino acid units, is
PT active against e.g. bronchial asthma and hay fever.
XX
XX Claim 1; Page 1; 3pp; Japanese.
XX
XX The sequence given can be used as the active component in an antiallergic
CC agent. Vasoactive intestinal polypeptide (VIP) has chemical mediator
CC isolation-inhibiting action and is effective for therapy and prevention
CC of various allergic diseases, such as allergic rhinitis, bronchial
CC asthma, allergic asthma, hay fever, urticaria, eczema, atopic dermatitis
CC etc. Since it also has specific bronchial smooth muscle relaxant action,
CC it is esp. useful for treating and preventing bronchial and allergic
CC asthma. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
CC 2003 to correct PA field.)
XX
XX Sequence 28 AA;

Query Match 90.7%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 10
AAP71039
ID AAP71039 standard; peptide; 28 AA.
XX
AC AAP71039;
XX
XX 03-OCT-2002 (revised)
DT 05-APR-1991 (first entry)
XX
XX Sequence of active ingredient in hair growth promoting compen.

XX Vasoactive intestinal tract polypeptide; digestive tract polypeptide;
KW hair growth promoter.
XX
XX Synthetic.
XX
XX EP225639-A.
XX
XX 16-JUN-1987.
XX
XX 10-DEC-1986; 86EP-00117190.
XX
XX 10-DEC-1985; 85JP-00276099.
XX
XX (MEIJ) MEIJI SEIKA KAISHA.
XX
XX Yanaihara N, Watanabe S, Kasai M, Sato T, Kikkoji T;
XX WPI; 1987-164873/24.
XX
XX Hair growth promoting compsns. - contg. vasoactive intestinal polypeptide
PT and carrier.
XX
XX Claim 1; Page 8; 10pp; English.
XX
XX When applied to the skin, the peptide causes a local increase in blood
CC flow and promotes hair growth. It is the natural peptide known as
CC vasoactive intestinal polypeptide which has been isolated from the
CC digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)
XX
XX Sequence 28 AA;

Query Match 90.7%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 11
AAR34943
ID AAR34943 standard; peptide; 28 AA.
XX
AC AAR34943;
XX
XX 25-MAR-2003 (revised)
DT 28-JUL-1993 (first entry)
XX
XX Porcine VIP.
XX
XX Vasoactive intestinal peptide; asthma; bronchodilation activity;
KW bronchiotracheal constrictive disorders.
XX
XX Sus scrofa.
XX
XX EP536741-A2.
XX
XX 14-APR-1993.
XX
XX 08-OCT-1992; 92EP-00117185.
XX
XX 11-OCT-1991; 91US-00773747.
XX
XX (HOFF) HOFFMANN LA ROCHE & CO AG F.
XX
XX Bolin DR, Odonnell M;
XX
XX WPI; 1993-118996/15.
XX
XX New cyclic vasoactive intestinal peptide (VIP) analogues - are useful for
PT the treatment of bronchotracheal constructive disorders e.g. asthma.

XX Disclosure; Page 65; 141pp; English.

XX The sequence is that of porcine vasoactive intestinal peptide (VIP) as
 CC claimed in EP-325044. The peptide sequence was used to design cyclic
 CC analogues of VIP which have enhanced bronchodilation activity without any
 CC observable side effects such as cardiovascular side effects. The
 CC bronchodilation produced by the analogues can be sustained for more than
 CC two hours. The analogues may be used for the treatment of bronchotracheal
 CC constrictive disorders, e.g. asthma. See also RR3944-5016. (Updated on 25
 CC -MAR-2003 to correct PN field.)

XX Sequence 28 AA;

Query Match 90.7%; Score 136; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.5e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 12
 AAR40272
 ID AAR40272 standard; protein; 28 AA.
 XX AC AAR40272;
 XX DT 25-MAR-2003 (revised)
 XX DT 09-FEB-1994 (first entry)
 XX DE Native VIP.
 XX KW Vasoactive intestinal peptide; VIP; bronchodilator; cardiovascular;
 XX side effect; bronchoconstrictive disorder; asthma.
 XX OS Sus scrofa.
 XX FH Key Location/Qualifiers
 FT Modified-site 28 /note= "C-terminal is amidated"
 FT US234907-A.
 PN 10-AUG-1993.
 PD 24-APR-1991; 91US-00690300.
 XX 30-JUN-1989; 89US-00374503.
 XX (HOFF) HOFFMANN LA ROCHE INC.
 XX Bolin DR;
 XX WPI; 1993-264645/33.
 XX New vasoactive intestinal peptide analogues - are potent bronchodilators
 PT without cardiovascular side effects, used for treating, e.g. asthma.
 XX Disclosure; Page 25-26; 66pp; English.
 XX VIP (AAR40272) was used in the prodn. of analogues (AAR40273-78: generic
 CC formulae; AAR40279-364: examples). The VIP analogues are potent
 CC bronchodilators and have no cardiovascular side effects. They are used
 CC for the treatment of bronchoconstrictive disorders, e.g. asthma. (Updated
 CC on 25-MAR-2003 to correct PF field.)

XX Sequence 28 AA;

Query Match 90.7%; Score 136; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.5e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 13
 AAR53111
 ID AAR53111 standard; peptide; 28 AA.
 XX AC AAR53111;
 XX DT 20-DEC-1994 (first entry)
 XX DE Bronchodilator peptide #21.
 XX KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
 XX selectively; toxicity; mammal; bronchodilator.
 XX OS Synthetic.
 XX FH Key Location/Qualifiers
 FT Misc-difference 10 /note= "D-form residue"
 FT Misc-difference 22 /note= "D-form residue"
 FT Modified-site 28 /note= "Amidated C-terminal"
 XX JP06092991-A.
 XX 05-APR-1994.
 XX 28-FEB-1991; 91JP-00034335.
 XX 28-FEB-1991; 91JP-00034335.
 XX (DAIL) DAICEL CHEM IND LTD.
 XX (MEIJ) MEIJI SEIKA KAISHA.
 XX WPI; 1994-147946/18.
 XX Active peptide(s), having smooth muscle relaxing activity - useful as
 PT bronchodilators.
 XX Disclosure; Page 5; 29pp; Japanese.
 XX The sequences given in AAR53091-111 are synthetic peptides based on
 CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
 CC the smooth muscle selectively and are only low toxic-non-toxic to
 CC mammals. These peptides may be used as bronchodilators. They are prepared
 CC by solid phase synthesis using a resin having an amino functional group
 CC capable of bonding to the amino acid at the carboxy terminal through a
 CC carboxyl group and fixing the peptide chain during the synthesis

XX Sequence 28 AA;

Query Match 90.7%; Score 136; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.5e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 14
 AAR53109
 ID AAR53109 standard; peptide; 28 AA.
 XX AC AAR53109;
 XX DT 20-DEC-1994 (first entry)

```

XX DE Bronchodilator peptide #19.
XX KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
XX KW selectivity; toxicity; mammal; bronchodilator.
XX OS Synthetic.
XX FH Key Location/Qualifiers
FT Misc-difference 10
FT /note= "D-form residue"
FT Modified-site 28
FT /note= "Amidated C-terminal"
XX PN JP06092991-A.
XX PD 05-APR-1994.
XX PF 28-FEB-1991; 91JP-00034335.
XX PR 28-FEB-1991; 91JP-00034335.
XX PA (DAIL ) DAICEL CHEM IND LTD.
XX PA (MEIJ ) MEIJI SEIKA KAISHA.
XX DR WPI; 1994-147946/18.
XX PT Active peptide(s), having smooth muscle relaxing activity - useful as
XX PT bronchodilators.
XX PS Disclosure; Page 5; 29pp; Japanese.
XX CC The sequences given in AAR53091-111 are synthetic peptides based on
XX CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
XX CC the smooth muscle selectively and are only low toxic-non- toxic to
XX CC mammals. These peptides may be used as bronchodilators. They are prepared
XX CC by solid phase synthesis using a resin having an amino functional group
XX CC capable of bonding to the amino acid at the carboxy terminal through a
XX CC carboxyl group and fixing the peptide chain during the synthesis
XX SQ Sequence 28 AA;

Query Match 90.7%; Score 136; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 15
AAR53110
ID AAR53110 standard; peptide; 28 AA.
XX AC AAR53110;
XX DT 20-DEC-1994 (first entry)
XX DE Bronchodilator peptide #20.
XX KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
XX KW selectivity; toxicity; mammal; bronchodilator.
XX OS Synthetic.
XX FH Key Location/Qualifiers
FT Misc-difference 22
FT /note= "D-form residue"
FT Modified-site 28
FT /note= "Amidated C-terminal"
XX PN JP06092991-A.

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XX 05-APR-1994.
XX 28-FEB-1991; 91JP-00034335.
XX 28-FEB-1991; 91JP-00034335.
XX (DAIL ) DAICEL CHEM IND LTD.
XX PA (MEIJ ) MEIJI SEIKA KAISHA.
XX DR WPI; 1994-147946/18.
XX PT Active peptide(s), having smooth muscle relaxing activity - useful as
XX PT bronchodilators.
XX PS Disclosure; Page 5; 29pp; Japanese.
XX CC The sequences given in AAR53091-111 are synthetic peptides based on
XX CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
XX CC the smooth muscle selectively and are only low toxic-non- toxic to
XX CC mammals. These peptides may be used as bronchodilators. They are prepared
XX CC by solid phase synthesis using a resin having an amino functional group
XX CC capable of bonding to the amino acid at the carboxy terminal through a
XX CC carboxyl group and fixing the peptide chain during the synthesis
XX SQ Sequence 28 AA;

Query Match 90.7%; Score 136; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:08:19
Job time : 78.875 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:08 ; Search time 21.875 Seconds
(without alignments)
105.825 Million cell updates/sec

Title: US-10-626-719-1

Perfect score: 150

Sequence: 1 HWDVFTDNYTLRLKQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents AA.*
1: /cgn2_6/ptodata/1/1aa/5 COMB.pcp.*
2: /cgn2_6/ptodata/1/1aa/6 COMB.pcp.*
3: /cgn2_6/ptodata/1/1aa/H COMB.pcp.*
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5: /cgn2_6/ptodata/1/1aa/RE COMB.pcp.*
6: /cgn2_6/ptodata/1/1aa/backfiles1.pcp.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	150	100.0	28	US-09-528-200-1	Sequence 1, Appli
2	150	100.0	28	US-09-528-200-64	Sequence 64, Appl
3	141	94.0	28	US-09-528-200-65	Sequence 65, Appl
4	140	93.3	28	US-09-528-200-56	Sequence 56, Appl
5	138	92.0	28	US-09-528-200-60	Sequence 60, Appl
6	137	91.3	28	US-09-528-200-57	Sequence 57, Appl
7	137	91.3	28	US-09-528-200-59	Sequence 59, Appl
8	137	91.3	28	US-09-528-200-61	Sequence 61, Appl
9	137	91.3	28	US-09-528-200-62	Sequence 62, Appl
10	136	90.7	28	US-07-690-300B-1	Sequence 1, Appli
11	136	90.7	28	US-07-676-987A-1	Sequence 1, Appli
12	136	90.7	28	US-07-868-906-1	Sequence 1, Appli
13	136	90.7	28	US-08-201-092-1	Sequence 1, Appli
14	136	90.7	28	US-07-924-054-11	Sequence 11, Appl
15	136	90.7	28	US-08-243-082-1	Sequence 1, Appli
16	136	90.7	28	US-08-161-443-1	Sequence 1, Appli
17	136	90.7	28	US-08-288-681A-1	Sequence 1, Appli
18	136	90.7	28	US-07-776-272-26	Sequence 26, Appl
19	136	90.7	28	US-08-308-729-1	Sequence 1, Appli
20	136	90.7	28	US-08-062-472B-40	Sequence 40, Appl
21	136	90.7	28	US-08-171-701A-1	Sequence 1, Appli
22	136	90.7	28	US-08-741-678-1	Sequence 1, Appli
23	136	90.7	28	US-08-519-180-2	Sequence 2, Appli
24	136	90.7	28	US-08-414-424-1	Sequence 1, Appli
25	136	90.7	28	US-08-413-708B-1	Sequence 1, Appli
26	136	90.7	28	US-08-818-253-37	Sequence 37, Appl
27	136	90.7	28	US-08-897-624-1	Sequence 1, Appli

28	136	90.7	28	2	US-08-930-845-1	Sequence 1, Appli
29	136	90.7	28	2	US-08-952-568-3	Sequence 3, Appli
30	136	90.7	28	2	US-08-952-568-4	Sequence 4, Appli
31	136	90.7	28	2	US-08-952-568-5	Sequence 5, Appli
32	136	90.7	28	2	US-08-952-568-6	Sequence 6, Appli
33	136	90.7	28	2	US-08-952-568-10	Sequence 10, Appl
34	136	90.7	28	2	US-08-952-568-11	Sequence 11, Appl
35	136	90.7	28	2	US-08-952-568-12	Sequence 12, Appl
36	136	90.7	28	2	US-08-952-568-13	Sequence 13, Appl
37	136	90.7	28	2	US-09-192-048-21	Sequence 21, Appl
38	136	90.7	28	2	US-08-893-749-2	Sequence 2, Appli
39	136	90.7	28	2	US-08-818-252-37	Sequence 37, Appl
40	136	90.7	28	2	US-09-260-846-16	Sequence 16, Appl
41	136	90.7	28	2	US-08-842-322-31	Sequence 31, Appl
42	136	90.7	28	2	US-09-333-842-1	Sequence 1, Appli
43	136	90.7	28	2	US-09-446-352B-1	Sequence 1, Appli
44	136	90.7	28	2	US-09-316-919-53	Sequence 53, Appl
45	136	90.7	28	2	US-09-630-335-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1
US-09-528-200-1
; Sequence 1, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide

Query Match 100.0%; Score 150; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 1.5e-14;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRLKQMAVKYLSILN 28
Db 1 HWDVFTDNYTLRLKQMAVKYLSILN 28

RESULT 2
US-09-528-200-64
; Sequence 64, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN

; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 64
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-64

Query Match 100.0%; Score 150; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 1.5e-14; Mismatches 0; Indels 0; Gaps 0;
Matches 28; Conservative 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
|:|||||||||||||||||||||
Db 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 3
US-09-528-200-65
; Sequence 65, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 65
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-65

Query Match 94.0%; Score 141; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-13; Mismatches 1; Indels 0; Gaps 0;
Matches 27; Conservative 1;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
|:|||||||||||||||||||||
Db 1 HYDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 4
US-09-528-200-56
; Sequence 56, Application US/09528200

; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 56
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-56

Query Match 93.3%; Score 140; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.9e-13; Mismatches 1; Indels 0; Gaps 0;
Matches 27; Conservative 1;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
|:|||||||||||||||||||||
Db 1 HFDVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 5
US-09-528-200-60
; Sequence 60, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 60
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-60

Query Match 92.0%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.4e-13; Mismatches 0; Indels 1; Gaps 0;
Matches 27; Conservative 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28

```

1  / GENERAL INFORMATION:
2  / APPLICANT: LICHA, KAI
3  / APPLICANT: BECKER, ANDREAS
4  / APPLICANT: SEMMLER, WOLFHARD
5  / APPLICANT: WEIDENMANN, BERTRAM
6  / APPLICANT: HESSNIUS, CARSTEN
7  / APPLICANT: VOLKMER-ENGERT, RUDOLF
8  / APPLICANT: SCHNEIDER-MERGNER, JENS
9  / APPLICANT: BHARGAVA, SARAH
10 / TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
11 / TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
12 / FILE REFERENCE: SCH-1731
13 / CURRENT APPLICATION NUMBER: US/09/528,200
14 / CURRENT FILING DATE: 2000-03-17
15 / PRIOR APPLICATION NUMBER: DE 199 17 713.9
16 / PRIOR FILING DATE: 1999-09-04
17 / NUMBER OF SEQ ID NOS: 196
18 / SOFTWARE: PatentIn Ver. 2.1
19 / SEQ ID NO 59
20 / LENGTH: 28
21 / TYPE: PRT
22 / ORGANISM: Artificial Sequence
23 / FEATURE:
24 / OTHER INFORMATION: Description of Artificial Sequence: Synthetic
25 / OTHER INFORMATION: peptide

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RESULT 9
US-09-528-200-62
; Sequence 62, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARSTEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGNER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1

1 SEQ ID NO 62
1 LENGTH: 28
1 TYPE: PRT
1 ORGANISM: Artificial Sequence
1 FEATURES:
1 OTHER INFORMATION: Description of Artificial Sequence: Synthetic
1 OTHER INFORMATION: peptide
US-09-528-200-62

Query Match 91.3%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HTDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 10
US-07-690-300B-1
1 Sequence 1, Application US/07690300B
1 Patent No. 5234907
1 GENERAL INFORMATION:
1 APPLICANT: Bolin, David R.
1 TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
1 TITLE OF INVENTION: Analogs
1 NUMBER OF SEQUENCES: 93
1 CORRESPONDENCE ADDRESS:
1 ADDRESSEE: Hoffmann-La Roche Inc.
1 STREET: 340 Kingeland Street
1 CITY: Nutley
1 STATE: New Jersey
1 COUNTRY: USA
1 ZIP: 07110
1 COMPUTER READABLE FORM:
1 MEDIUM TYPE: Floppy disk
1 COMPUTER: IBM PC compatible
1 OPERATING SYSTEM: PC-DOS/MS-DOS
1 SOFTWARE: PatentIn Release #1.0, Version #1.25
1 CURRENT APPLICATION DATA:
1 APPLICATION NUMBER: US/07/690,300B
1 FILING DATE: 19910424
1 CLASSIFICATION: 514
1 PRIOR APPLICATION DATA:
1 APPLICATION NUMBER: US 07/374,503
1 FILING DATE: 30-JUN-1989
1 ATTORNEY/AGENT INFORMATION:
1 NAME: Pokras, Bruce A.
1 REGISTRATION NUMBER: 32,748
1 REFERENCE/DOCKET NUMBER: 8480
1 TELECOMMUNICATION INFORMATION:
1 TELEPHONE: (201) 235-5801
1 TELEFAX: (201) 235-3500
1 INFORMATION FOR SEQ ID NO: 1:
1 SEQUENCE CHARACTERISTICS:
1 LENGTH: 28 amino acids
1 TYPE: AMINO ACID
1 TOPOLOGY: linear
1 MOLECULE TYPE: peptide
1 HYPOTHETICAL: NO
1 ANTI-SENSE: NO
1 ORIGINAL SOURCE:
1 ORGANISM: Sus scrofa
US-07-690-300B-1

Query Match 90.7%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.4e-12;
Matches 27; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 11
US-07-676-987A-1
1 Sequence 1, Application US/07676987A
1 Patent No. 5273963
1 GENERAL INFORMATION:
1 APPLICANT: TERRY W. MOODY
1 TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
1 TITLE OF INVENTION: CELL AND NONSMALL CELL LUNG CANCERS
1 NUMBER OF SEQUENCES: 2
1 CORRESPONDENCE ADDRESS:
1 ADDRESSEE: ROTHWELL, FIGG, ERNST & KURZ
1 STREET: 555 THIRTEENTH ST. N.W.
1 CITY: WASHINGTON
1 STATE: D. C.
1 COUNTRY: U.S.
1 ZIP: 20004
1 COMPUTER READABLE FORM:
1 MEDIUM TYPE: Floppy disk
1 COMPUTER: IBM PC compatible
1 OPERATING SYSTEM: PC-DOS/MS-DOS
1 SOFTWARE: PatentIn Release #1.0, Version #1.25
1 CURRENT APPLICATION DATA:
1 APPLICATION NUMBER: US/07/676,987A
1 FILING DATE: 19910329
1 CLASSIFICATION: 514
1 ATTORNEY/AGENT INFORMATION:
1 NAME: REPPER, GEORGE R.
1 REGISTRATION NUMBER: 31,414
1 REFERENCE/DOCKET NUMBER: 1783-101
1 TELECOMMUNICATION INFORMATION:
1 TELEPHONE: (202) 783-6040
1 TELEFAX: (202) 783-6031
1 INFORMATION FOR SEQ ID NO: 1:
1 SEQUENCE CHARACTERISTICS:
1 LENGTH: 28 amino acids
1 TYPE: AMINO ACID
1 TOPOLOGY: linear
1 MOLECULE TYPE: peptide
US-07-676-987A-1

Query Match 90.7%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 12
US-07-868-906-1
1 Sequence 1, Application US/07868906
1 Patent No. 5376637
1 GENERAL INFORMATION:
1 APPLICANT: Sawai, Kiichi
1 APPLICANT: Kuroso, Masayasu
1 APPLICANT: Mitani, Takahiko
1 APPLICANT: Sato, Makoto
1 APPLICANT: Takahashi, Haruo
1 APPLICANT: Ohwaki, Hiroyuki
1 TITLE OF INVENTION: PHARMACEUTICAL PREPARATION CONTAINING
1 TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE OR ITS ANALOGUE
1 NUMBER OF SEQUENCES: 3
1 CORRESPONDENCE ADDRESS:
1 ADDRESSEE: Nikaido, Marmelstein, Murray & Oram
1 STREET: 1725 K St. N.W. Suite 1000
1 CITY: Washington
1 STATE: D.C.
1 COUNTRY: USA
1 ZIP: 20006
1 COMPUTER READABLE FORM:
1 MEDIUM TYPE: Floppy disk

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;
; ATTORNEY/AGENT INFORMATION:
; NAME: Oram Jr., George E.
; REGISTRATION NUMBER: 27,931
; REFERENCE/DOCKET NUMBER: N910809
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202)-659-2930
; TELEFAX: (202)-887-0357
; TELEX: 440142
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; FRAGMENT TYPE: C-terminal
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Small intestine, proximal
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; US-08-201-092-1
;
; Query Match 90.7%; Score 136; DB 1; Length 28;
; Best Local Similarity 96.4%; Pred. No. 1.4e-12;
; Matches 27; Conservative 0; Mismatches 1; Indels
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; QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
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; DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
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; RESULT 14
; US-07-924-054-11
; Sequence 11, Application US/07924054
; Patent No. 5486472
; GENERAL INFORMATION:
; APPLICANT: SUZUKI, No. 5486472uhiro
; APPLICANT: KITADA, Chieko
; APPLICANT: TSUDA, Masao
; TITLE OF INVENTION: ANTIBODY TO PACAP AND USE THEREOF
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: DAVID G. CONLIN; DIKE, BRONSTEIN, ROBERTS&
; ADDRESSEE: CUSHMAN
; STREET: 130 Water Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: US
; ZIP: 02109
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/924,054
; FILING DATE: 19920903
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: RESNICK, David S
; REGISTRATION NUMBER: 34235
; REFERENCE/DOCKET NUMBER: 40805
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 523-3400
; TELEFAX: (617) 523-6440
; TELEX: 200291 STRE UR
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
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; US-07-924-054-11
;
; Query Match 90.7%; Score 136; DB 1; Length 28;

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2	136	90.7	28	3	US-09-999-745-53	Sequence 53, Appl	
3	136	90.7	28	3	US-09-554-000-37	Sequence 37, Appl	
4	136	90.7	28	4	US-10-090-109A-1	Sequence 1, Appli	
5	136	90.7	28	4	US-10-044-722-8	Sequence 8, Appli	
6	136	90.7	28	4	US-10-004-530A-17	Sequence 17, Appl	
7	136	90.7	28	4	US-10-114-716A-3	Sequence 3, Appli	
8	136	90.7	28	4	US-10-211-994-1	Sequence 1, Appli	
9	136	90.7	28	4	US-10-197-954-145	Sequence 145, App	
10	136	90.7	28	4	US-10-100-2568-1	Sequence 1, Appli	
11	136	90.7	28	4	US-10-254-569A-1	Sequence 1, Appli	
12	136	90.7	28	4	US-10-201-288-31	Sequence 31, Appl	
13	136	90.7	28	4	US-10-343-654-22	Sequence 22, Appl	
14	136	90.7	28	4	US-10-416-822-1	Sequence 1, Appli	
15	136	90.7	28	4	US-10-467-059-14	Sequence 14, Appl	
16	136	90.7	28	5	US-10-494-634-7	Sequence 7, Appli	
17	136	90.7	28	5	US-10-718-071-36	Sequence 36, Appl	
18	136	90.7	28	5	US-10-788-563-17	Sequence 17, Appl	
19	136	90.7	28	5	US-10-760-085-145	Sequence 145, App	
20	136	90.7	28	5	US-10-892-981A-1	Sequence 1, Appli	
21	136	90.7	28	5	US-10-769-803-2	Sequence 2, Appli	
22	136	90.7	28	5	US-10-919-325-32	Sequence 32, Appl	
23	136	90.7	28	5	US-10-898-143-1	Sequence 1, Appli	
24	136	90.7	28	5	US-10-930-548-3	Sequence 3, Appli	
25	136	90.7	28	5	US-10-770-713-56	Sequence 56, Appl	
26	136	90.7	28	5	US-10-799-897A-1	Sequence 1, Appli	
27	136	90.7	28	6	US-11-066-697-454	Sequence 454, App	


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; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-004-530A-17

Query Match          90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 7
US-10-114-716A-3
; Sequence 3, Application US/10114716A
; Publication No. US20030078203A1
; GENERAL INFORMATION:
; APPLICANT: Sudhir Paul
; APPLICANT: Yasuhiro Nishiyama
; TITLE OF INVENTION: Covalently Reactive Transition State
; TITLE OF INVENTION: Analogs and Methods of Use Thereof
; FILE REFERENCE: UTH001HB
; CURRENT APPLICATION NUMBER: US/10/114,716A
; CURRENT FILING DATE: 2002-04-01
; PRIOR APPLICATION NUMBER: 09/862,849
; PRIOR FILING DATE: 2001-05-22
; PRIOR APPLICATION NUMBER: 09/046,373
; PRIOR FILING DATE: 1998-03-23
; PRIOR APPLICATION NUMBER: 60/280,624
; PRIOR FILING DATE: 2001-03-31
; NUMBER OF SEQ ID NOS: 57
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Vasoactive intestinal peptide
US-10-114-716A-3

Query Match          90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 8
US-10-211-994-1
; Sequence 1, Application US/10211994
; Publication No. US20030082201A1
; GENERAL INFORMATION:
; APPLICANT: Rao, M.R.S.
; APPLICANT: Sengupta, Paromita
; APPLICANT: Prasad, Sudhanand
; APPLICANT: Burman, Anand C.
; APPLICANT: Mukherjee, Rama
; APPLICANT: Thomas, Becky
; TITLE OF INVENTION: MULTIVALENT SYNTHETIC VACCINE FOR CANCER
; FILE REFERENCE: U014152-1
; CURRENT APPLICATION NUMBER: US/10/211,994
; CURRENT FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: 60/309,975
; PRIOR FILING DATE: 2001-08-03
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-100-256B-1

; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-004-530A-17

Query Match          90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 9
US-10-197-954-145
; Sequence 145, Application US/10197954
; Publication No. US20030119021A1
; GENERAL INFORMATION:
; APPLICANT: K'ster, Hubert
; APPLICANT: Siddiqi, Suhaib
; APPLICANT: Little, Daniel
; TITLE OF INVENTION: Capture Compounds, Collections Thereof
; TITLE OF INVENTION: And Methods For Analyzing The Proteome And Complex
; TITLE OF INVENTION: Compositions
; FILE REFERENCE: 24743-2305
; CURRENT APPLICATION NUMBER: US/10/197,954
; CURRENT FILING DATE: 2002-07-16
; PRIOR APPLICATION NUMBER: 60/306,019
; PRIOR FILING DATE: 2001-07-16
; PRIOR APPLICATION NUMBER: 60/314,123
; PRIOR FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 60/363,433
; PRIOR FILING DATE: 2002-03-11
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 145
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-197-954-145

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Best Local Similarity 96.4%; Pred. No. 4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 10
US-10-100-256B-1
; Sequence 1, Application US/10100256B
; Publication No. US20030152511A1
; GENERAL INFORMATION:
; APPLICANT: Thakur, Madhukar
; TITLE OF INVENTION: RADIOLABELED VASOACTIVE INTESTINAL
; TITLE OF INVENTION: PEPTIDE ANALOGS FOR IMAGING AND THERAPY
; FILE REFERENCE: 8321-104-D11
; CURRENT APPLICATION NUMBER: US/10/100,256B
; CURRENT FILING DATE: 2002-03-15
; PRIOR APPLICATION NUMBER: US 09/333,842
; PRIOR FILING DATE: 1999-06-15
; PRIOR APPLICATION NUMBER: US 60/089,364
; PRIOR FILING DATE: 1998-06-15
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-100-256B-1
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Best Local Similarity 96.4%; Pred. No. 4e-12;
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RESULT 11
US-10-254-569A-1
; Sequence 1, Application US/10254569A
; Publication No. US20030158110A1
; GENERAL INFORMATION:
; APPLICANT: BURMAN C, ANAND
; APPLICANT: PRASAD, SUDHANAND
; APPLICANT: MUKHERJEE, RAMA
; APPLICANT: SINGH T, ANU
; APPLICANT: MATHUR, ARCHNA
; APPLICANT: GUPTA, NEENA
; TITLE OF INVENTION: VASOACTIVE INTESTINAL PEPTIDES ANALOGS
; FILE REFERENCE: 014071-1
; CURRENT APPLICATION NUMBER: US/10/254,569A
; CURRENT FILING DATE: 2002-12-05
; PRIOR APPLICATION NUMBER: 136/DEL/2000
; PRIOR FILING DATE: 2000-02-18
; PRIOR APPLICATION NUMBER: 09/630,335
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-254-569A-1

Query Match          90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 12
US-10-201-288-31
; Sequence 31, Application US/10201288
; Publication No. US20030203373A1
; GENERAL INFORMATION:
; APPLICANT: SCHLEUNING, Wolf-Dieter
; APPLICANT: SCHULZ, Torsten
; TITLE OF INVENTION: METHOD FOR IDENTIFYING A PHARMACOLOGICALLY ACTIVE SUBSTANCE
; FILE REFERENCE: Q71278
; CURRENT APPLICATION NUMBER: US/10/201,288
; CURRENT FILING DATE: 2002-10-23
; PRIOR APPLICATION NUMBER: DE 102 08 178.5
; PRIOR FILING DATE: 2002-02-20
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 31
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Human
US-10-201-288-31

Query Match          90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 13
US-10-343-654-22
; Sequence 22, Application US/10343654
; Publication No. US20030204063A1
; GENERAL INFORMATION:
; APPLICANT: Denis Gravel (Inventor)
; APPLICANT: Abdelkrim Habi (Inventor)
; APPLICANT: Thierry Abribat (Inventor)
; APPLICANT: Theratechnologies Inc. (Assignee)
; TITLE OF INVENTION: Modified Biological Peptides with
; TITLE OF INVENTION: Increased Potency
; FILE REFERENCE: 12411-22PCT
; CURRENT APPLICATION NUMBER: US/10/343,654
; CURRENT FILING DATE: 2003-02-03
; NUMBER OF SEQ ID NOS: 50
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 22
; LENGTH: 28
; TYPE: PRT
; ORGANISM: human
; FEATURE:
; NAME/KEY: AMIDATION
; LOCATION: (28)...(28)
US-10-343-654-22

Query Match          90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 14
US-10-416-822-1
; Sequence 1, Application US/10416822
; Publication No. US20040063631A1
; GENERAL INFORMATION:
; APPLICANT: Mondobiotech SA
; TITLE OF INVENTION: Use of biologically active peptides for the treatment of pulmonary
; FILE REFERENCE: PMB-0203 US
; CURRENT APPLICATION NUMBER: US/10/416,822
; CURRENT FILING DATE: 2003-05-13
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-416-822-1

Query Match          90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 15
US-10-467-059-14
; Sequence 14, Application US/10467059
; Publication No. US20040132648A1
; GENERAL INFORMATION:
; APPLICANT: ONOUE, SATOMI
; APPLICANT: KASHIMOTO, KAZUHISA
; TITLE OF INVENTION: THERAPEUTIC AND/OR PROPHYLACTIC AGENT AGAINST CONFORMATIONAL DISEASE
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; FILE REFERENCE: 241706USOECT
; CURRENT APPLICATION NUMBER: US/10/467,059
; CURRENT FILING DATE: 2004-01-26
; PRIOR APPLICATION NUMBER: PCT/JP02/13311
; PRIOR FILING DATE: 2002-12-19
; PRIOR APPLICATION NUMBER: JP 2001-386699
; PRIOR FILING DATE: 2001-12-19
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 14
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-467-059-14

Query Match      90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

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Search completed: January 25, 2006, 15:31:03
Job time : 54.625 secs

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OM protein - protein search, using sw model

Run on: January 25, 2006, 15:08:34 ; Search time 3.5 Seconds
(without alignments)
86.633 Million cell updates/sec

Title: US-10-626-719-1

Perfect score: 150

Sequence: 1 HWDVFTDNYTLRLKQMAVKYLSILN 28

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Searched: 75621 seqs, 10829074 residues

Total number of hits satisfying chosen parameters: 75621

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA_New.*
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2: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep.*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	136	90.7	28	7 US-11-175-690-353	Sequence 353, App
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7	99	66.0	27	7 US-11-175-690-327	Sequence 327, App
8	99	66.0	38	7 US-11-175-690-328	Sequence 328, App
9	99	66.0	38	7 US-11-175-690-329	Sequence 329, App
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11	99	66.0	647	7 US-11-175-690-241	Sequence 241, App
12	99	66.0	647	7 US-11-175-690-242	Sequence 242, App
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14	70	46.7	27	7 US-11-175-690-364	Sequence 364, App
15	70	46.7	27	7 US-11-175-690-365	Sequence 365, App
16	70	46.7	636	7 US-11-175-690-277	Sequence 277, App
17	62	41.3	30	7 US-11-112-277-30	Sequence 30, Appl
18	58	38.7	30	7 US-11-112-277-2	Sequence 2, Appl
19	56	37.3	30	7 US-11-112-277-29	Sequence 29, Appl
20	56	37.3	30	7 US-11-112-277-31	Sequence 31, Appl
21	56	37.3	49	6 US-10-997-081A-26	Sequence 26, Appl
22	56	37.3	49	6 US-10-997-081A-27	Sequence 27, Appl
23	56	37.3	49	6 US-10-997-081A-28	Sequence 28, Appl
24	56	37.3	49	6 US-10-997-081A-29	Sequence 29, Appl
25	56	37.3	49	6 US-10-997-081A-30	Sequence 30, Appl

26	56	37.3	49	6	US-10-997-081A-31	Sequence 31, Appl
27	56	37.3	49	6	US-10-997-081A-32	Sequence 32, Appl
28	56	37.3	49	6	US-10-997-081A-35	Sequence 35, Appl
29	56	37.3	95	6	US-10-997-081A-25	Sequence 25, Appl
30	56	37.3	97	6	US-10-997-081A-11	Sequence 11, Appl
31	56	37.3	97	6	US-10-997-081A-18	Sequence 18, Appl
32	56	37.3	97	6	US-10-997-081A-19	Sequence 19, Appl
33	56	37.3	97	6	US-10-997-081A-20	Sequence 20, Appl
34	56	37.3	97	6	US-10-997-081A-21	Sequence 21, Appl
35	56	37.3	97	6	US-10-997-081A-22	Sequence 22, Appl
36	56	37.3	97	6	US-10-997-081A-23	Sequence 23, Appl
37	56	37.3	97	6	US-10-997-081A-40	Sequence 40, Appl
38	56	37.3	97	6	US-10-997-081A-41	Sequence 41, Appl
39	56	37.3	105	6	US-10-997-081A-10	Sequence 10, Appl
40	49	32.7	337	6	US-10-793-626-444	Sequence 444, App
41	47.5	31.7	381	6	US-10-467-657-2254	Sequence 2254, Ap
42	47	31.3	188	7	US-11-036-797-37	Sequence 37, Appl
43	46.5	31.0	162	6	US-10-821-234-1621	Sequence 1621, Ap
44	46	30.7	556	7	US-11-124-368A-303	Sequence 303, App
45	45	30.0	198	6	US-10-793-626-2188	Sequence 2188, Ap

ALIGNMENTS

RESULT 1
US-11-175-690-352
; Sequence 352, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 352
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-352

Query Match 90.7%; Score 136; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. NO. 2e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRLKQMAVKYLSILN 28
DB 1 HSDAVFTDNYTLRLKQMAVKYLSILN 28

RESULT 2
US-11-175-690-353
; Sequence 353, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:

Best Local Similarity 96.4%; Pred. No. 6.5e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
DB 610 HSDAVFTDNYTLRKQMAVKKYLNSILN 637

RESULT 4
US-11-175-690-266
; Sequence 266, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 353
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-353

Query Match 90.7%; Score 136; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 3
US-11-175-690-265
; Sequence 265, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match 90.7%; Score 136; DB 7; Length 637;

Best Local Similarity 96.4%; Pred. No. 6.5e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
DB 610 HSDAVFTDNYTLRKQMAVKKYLNSILN 637

RESULT 4
US-11-175-690-266
; Sequence 266, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 353
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-353

Query Match 90.7%; Score 136; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 3
US-11-175-690-265
; Sequence 265, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match 90.7%; Score 136; DB 7; Length 637;

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US-11-175-690-327
: Sequence 327, Application US/11/175690
: Publication No. US20060014254A1
: GENERAL INFORMATION:
: APPLICANT: Haseltine et al.
: TITLE OF INVENTION: Albumin Fusion Proteins
: FILE REFERENCE: PF605
: CURRENT APPLICATION NUMBER: US/11/175,690

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QY 1 HWDVFTDNYTRLRQMAVKKYLNSIL 27

us-10-626-719-1.rapbn

Wed Feb 8 17:49:00 2006

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; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 239
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-239

Query Match          66.0%; Score 99; DB 7; Length 636;
Best Local Similarity 66.7%; Pred. No. 2.2e-07;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

QY      1 HWDVFTDNYTRLRKQMAVKKYLNSIL 27
Db      610 HSDGIFTDSYRKRQMAVKKYLAAVL 636

RESULT 11
US-11-175-690-241
; Sequence 241, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 241
; LENGTH: 647
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-241

Query Match          66.0%; Score 99; DB 7; Length 647;
Best Local Similarity 66.7%; Pred. No. 2.2e-07;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

QY      1 HWDVFTDNYTRLRKQMAVKKYLNSIL 27
Db      610 HSDGIFTDSYRKRQMAVKKYLAAVL 636

RESULT 12
US-11-175-690-242
; Sequence 242, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 241
; LENGTH: 647
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-241

Query Match          66.0%; Score 99; DB 7; Length 38;
Best Local Similarity 66.7%; Pred. No. 9.5e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

QY      1 HWDVFTDNYTRLRKQMAVKKYLNSIL 27
Db      1 HSDGIFTDSYRKRQMAVKKYLAAVL 27

RESULT 10
US-11-175-690-239
; Sequence 239, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 329
; LENGTH: 38
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-329
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; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 242
; LENGTH: 647
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-242
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```
Query Match 66.0%; Score 99; DB 7; Length 647;
Best Local Similarity 66.7%; Pred. No. 2.2e-07;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;
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```
QY 1 HWDVFTDNYTLRKQMAVKKYLNSIL 27
| | | | | | | | | | | | | | | | | |
DB 25 HSDGIFTDSYRKRQMAVKKYLAAVL 51
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RESULT 13
US-11-175-690-278
; Sequence 278, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 278
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-278
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Query Match 47.3%; Score 71; DB 7; Length 636;
Best Local Similarity 42.9%; Pred. No. 0.0033;
Matches 12; Conservative 9; Mismatches 7; Indels 0; Gaps 0;
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QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | |
DB 25 HADGVFTSDFSKLGLQLSAKKYLESLMD 52
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```
RESULT 14
US-11-175-690-364
; Sequence 364, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 364
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-364
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Query Match 46.7%; Score 70; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 0.00014;
Matches 12; Conservative 8; Mismatches 7; Indels 0; Gaps 0;
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QY 1 HWDVFTDNYTLRKQMAVKKYLNSIL 27
| | | | | | | | | | | | | | | | |
DB 1 HADGVFTSDFSKLGLQLSAKKYLESLM 27
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RESULT 15
US-11-175-690-365
; Sequence 365, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 365
; LENGTH: 27
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us-10-626-719-1.rapbn

Wed Feb 8 17:49:00 2006

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; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-365
Query Match      46.7%; Score 70; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 0.00014;
Matches 12; Conservative 8; Mismatches 7; Indels 0; Gaps 0;

QY      1 HWDVFTDNYTRLRKQMAVKKYLNSIL 27
      | | | | | : : : | | | | | : :
Db      1 HADGVFTSDFSKLLGQLSAKKYLESLM 27

Search completed: January 25, 2006, 15:31:42
Job time : 4.5 secs
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:55:03 ; Search time 13.25 Seconds
(without alignments)
203.326 Million cell updates/sec

Title: US-10-626-719-1

Perfect score: 150

Sequence: 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : PIR 80:*

1: pir1:*

2: pir2:*

3: pir3:*

4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
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2	136	90.7	28	A60304	vasoactive intesti
3	136	90.7	55	1 VRBO	vasoactive intesti
4	136	90.7	55	1 VRRB	vasoactive intesti
5	136	90.7	55	1 VRSH	vasoactive intesti
6	136	90.7	58	1 VRPG	vasoactive intesti
7	136	90.7	145	2 A60038	vasoactive intesti
8	136	90.7	170	1 VRHU	vasoactive intesti
9	136	90.7	170	1 VRRT	vasoactive intesti
10	136	90.7	170	2 A60037	vasoactive intesti
11	123	82.0	55	1 VRGP	vasoactive intesti
12	121	80.7	165	1 VRCH	vasoactive intesti
13	120	80.0	28	2 A60303	vasoactive intesti
14	113	75.3	28	2 A38232	vasoactive intesti
15	110	73.3	25	2 JQ0361	vasoactive intesti
16	99	66.0	27	2 A61071	pituitary adenylat
17	99	66.0	38	2 A61070	pituitary adenylat
18	99	66.0	38	2 A49165	pituitary adenylat
19	99	66.0	173	2 S34767	neuropeptides prec
20	99	66.0	175	2 A37786	pituitary adenylat
21	99	66.0	176	2 I84638	pituitary adenylat
22	99	66.0	176	2 A34044	pituitary adenylat
23	99	66.0	195	2 I50456	pituitary adenylat
24	75	50.0	35	1 HWGHD	exendin-2 - Gila m
25	72	48.0	38	1 HWGHS	exendin-1 - Mexico
26	69	46.0	103	2 A41410	somatoliberin prec
27	67	44.7	104	2 A32731	somatoliberin prec
28	61	40.7	44	1 RHBS	somatoliberin - bo
29	56	37.3	27	1 SECH	secretin - chicken

30 56 37.3 44 1 RHPG
31 56 37.3 108 1 RHHUS
32 52 34.7 206 2 I51301
33 52 34.7 276 2 AD1860
34 52 34.7 588 2 T33815
35 51.5 34.3 781 2 AC2086
36 51 34.0 443 2 C70392
37 50 33.3 168 2 F90095
38 49.5 33.0 353 2 C69863
39 49 32.7 329 2 T24217
40 49 32.7 532 2 B82354
41 48.5 32.3 376 2 B81804
42 48.5 32.3 376 2 D81086
43 48 32.0 111 2 C88678
44 48 32.0 249 2 T26482
45 48 32.0 346 2 T44327

somatoliberin - pi
somatoliberin prec
proglucagon - chic
two-component resp
hypothetical prote
hypothetical prote
gamma-glutamyl pho
hypothetical prote
translation initia
hypothetical prote
deoxycytidylate de
probable polyamine
spermidine/putresc
protein H06H21.7
hypothetical prote
hypothetical prote

ALIGNMENTS

RESULT 1

B60071

vasoactive intestinal peptide - rhesus macaque
C:Species: Macaca mulatta (rhesus macaque)

C:Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 20-Mar-1998

C:Accession: B60071

R:Yu, J.; Xin, Y.; Eng, J.; Yalow, R.S.

Regul. Pept. 32, 39-45, 1991

A:Title: Rhesus monkey gastroenteropancreatic hormones: relationship to human sequences.

A:Reference number: A60071; MUID:91164506; PMID:2003150

A:Accession: B60071

A>Status: protein sequence not shown

A:Molecule type: protein

A:Residues: 1-28 <YUN>

A:Cross-references: UNIPARC:UPI000002D1C0

A>Note: the sequence is identical with the human sequence

C:Superfamily: glucagon

C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 90.7%; Score 136; DB 2; Length 28;

Best Local Similarity 96.4%; Pred. No. 9.9e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28

Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 2

A60304

vasoactive intestinal peptide - dog

N:Alternate names: VIP

C:Species: Canis lupus familiaris (dog)

C:Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change 09-Jul-2004

C:Accession: A60304

R:Eng, J.; Pan, Y.C.E.; Kaufman, J.P.; Yalow, R.S.

Regul. Pept. Suppl. 3, S14, 1985

A:Title: Purification and sequencing of dog and guinea pig VIP's.

A:Reference number: A60304

A:Accession: A60304

A:Molecule type: protein

A:Residues: 1-28 <ENG>

A:Cross-references: UNIPROT:P04565; UNIPARC:UPI000002D1C0

C:Superfamily: glucagon

C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 90.7%; Score 136; DB 2; Length 28;

Best Local Similarity 96.4%; Pred. No. 9.9e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28

Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Db 1 HSDAVFTDNTYRLRKQMAVKYKYLNSILN 28

RESULT 3

VRBO

N;Contains: vasoactive intestinal peptide precursor - bovine (fragments)
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Bos primigenius taurus (cattle)
C;Date: 26-Apr-1996 #sequence_revision 03-May-1996 #text_change 07-May-1999
C;Accession: A61643; A61644; S09689
R;Carlquist, M.; Kaiser, R.; Tatemoto, K.; Joernvall, H.; Mutt, V.
Eur. J. Biochem. 144, 243-247, 1984
A;Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper in
A;Reference number: A61643; MUID:85027215; PMID:6548446
A;Accession: A61643
A;Molecule type: protein
A;Residues: 1-27 <CAR>
A;Cross-references: UNIPARC:UPI0000173515
R;Carlquist, M.; Mutt, V.; Joernvall, H.
FEBS Lett. 108, 457-460, 1979
A;Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).
A;Reference number: A61644; MUID:80092152; PMID:520589
A;Accession: A61644
A;Molecule type: protein
A;Residues: 28-55 <CA2>
A;Cross-references: UNIPARC:UPI000002D1C0
R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, R.
Biochim. Biophys. Acta 1038, 355-359, 1990
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide
A;Reference number: S09688; MUID:90254163; PMID:2340294
A;Contents: annotation; comparison of mammalian PHI sequences
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 90.7%; Score 136; DB 1; Length 55;

Best Local Similarity 96.4%; Pred. No. 28-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;

Qy 1 HWDVFTDNTYRLRKQMAVKYKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKYKYLNSILN 55

RESULT 4

VRBB

N;Contains: vasoactive intestinal peptide precursor - rabbit (fragments)
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 03-Feb-1993 #sequence_revision 19-Apr-1996 #text_change 20-Mar-1998
C;Accession: B60415; A60415
R;Gossen, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht, P.
Peptides 11, 123-128, 1990
A;Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.
A;Reference number: A60415; MUID:90259845; PMID:2342988
A;Accession: B60415
A;Molecule type: protein
A;Residues: 1-27 <GOS>
A;Cross-references: UNIPARC:UPI00000351DB
A;Accession: A60415
A;Molecule type: protein
A;Residues: 28-55 <G02>
A;Cross-references: UNIPARC:UPI00000351DB
C;Superfamily: Glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 90.7%; Score 136; DB 1; Length 55;

Best Local Similarity 96.4%; Pred. No. 28-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;

Qy 1 HWDVFTDNTYRLRKQMAVKYKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKYKYLNSILN 55

RESULT 6

VRPG

N;Contains: vasoactive intestinal peptide precursor - pig (fragments)
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Sus scrofa domestica (domestic pig)
C;Date: 24-Apr-1984 #sequence_revision 05-Jan-1996 #text_change 09-Jul-2004
C;Accession: A01549; A60300; A01550; JTD0417; A56754; S09690
R;Tatemoto, K.; Mutt, V.
Proc. Natl. Acad. Sci. U.S.A. 78, 6603-6607, 1981
A;Title: Isolation and characterization of the intestinal peptide porcine PHI (PHI-27),
A;Reference number: A01549; MUID:82082498; PMID:6947244

Query Match 90.7%; Score 136; DB 1; Length 55;

Best Local Similarity 96.4%; Pred. No. 28-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;

Qy 1 HWDVFTDNTYRLRKQMAVKYKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKYKYLNSILN 55

RESULT 5

VRSH

N;Contains: vasoactive intestinal peptide precursor - sheep (fragments)
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C;Date: 31-Mar-1993 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
C;Accession: B60072; A60072; G61063; A43974
R;Bounjoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.
Regul. Pept. 32, 169-179, 1991
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide 1
A;Reference number: A60072; MUID:91239834; PMID:2034821
A;Accession: B60072
A;Molecule type: protein
A;Residues: 1-27 <BOU>
A;Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515
A;Accession: A60072
A;Molecule type: protein
A;Residues: 28-55 <BO2>
A;Cross-references: UNIPARC:UPI000002D1C0
R;Miyata, A.; Jiang, L.; Stibbs, H.H.; Arimura, A.
Regul. Pept. 38, 145-154, 1992
A;Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreacti
A;Reference number: A61063; MUID:92245116; PMID:1574609
A;Accession: C61063
A;Molecule type: protein
A;Residues: 28-55 <MI>
A;Cross-references: UNIPARC:UPI000002D1C0
A;Experimental source: hypothalamus, intestine
R;Gafvelin, G.

Query Match 90.7%; Score 136; DB 1; Length 55;

Best Local Similarity 96.4%; Pred. No. 28-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;

Query Match 90.7%; Score 136; DB 1; Length 55;

Best Local Similarity 96.4%; Pred. No. 28-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;

Qy 1 HWDVFTDNTYRLRKQMAVKYKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKYKYLNSILN 55

R; Benson, D.L.; Isaacson, P.J.; Jones, E.G.
Brain Res. Mol. Brain Res. 9, 169-174, 1991
A>Title: In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey ar
A;Reference number: A60038; MUID:91203476; PMID:1850073
A;Accession: A60038
A;Status: not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-145 <BEN>
A;Cross-references: UNIPROT:Q7MZ9; UNIPARC:UPI000017662C
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodil

Query Match 90.7%; Score 136; DB 2; Length 145;
Best Local Similarity 96.4%; Pred. No. 5.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | |
Db 100 HSDAVFTDNYTLRKQMAVKKYLNSILN 127

RESULT 8
VRHU
vasoactive intestinal peptide precursor [validated] - human
N;Alternate names: Vip precursor
N;Contains: peptide histidine-methionine (PHM-27); peptide histidine-valine (PHV-42); vas
C;Species: Homo sapiens (man)
C;Date: 14-Nov-1983 #sequence revision 14-Nov-1983 #text change 09-Jul-2004
C;Accession: A23296; A93313; A60205; A26361; A27419; JH0618; I51955; I56494; I56988; A019
R;Tsukada, T.; Horowitz, S.J.; Montminy, M.R.; Mandel, G.; Goodman, R.H.
DNA 4, 293-300, 1985
A>Title: Structure of the human vasoactive intestinal polypeptide gene.
A;Reference number: A90952; MUID:86004065; PMID:3899557
A;Accession: A23296
A;Molecule type: DNA
A;Residues: 1-170 <TSU>
A;Cross-references: UNIPROT:P01282; UNIPARC:UPI000003B343; GB:M11553; NID:G340243; PIDN:A
A;Note: the authors translated the codon GAA for residue 48 as Glu
R;Itch, N.; Obata, K.; Yanaihara, N.; Okamoto, H.
Nature 304, 547-549, 1983
A>Title: Human preprovasoactive intestinal polypeptide contains a novel PHI-27-like peptid
A;Reference number: A93313; MUID:83271523; PMID:6571696
A;Accession: A93313
A;Molecule type: mRNA
A;Residues: 1-170 <ITO>
A;Cross-references: UNIPARC:UPI000003B343; GB:L00157; GB:J00320; NID:G340277; PIDN:AAA611
R;Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 48, 1136-1141, 1987
A>Title: Vasoactive intestinal peptide gene: putative mechanism of information storage at
A;Reference number: A60205; MUID:87140054; PMID:2434617
A;Accession: A60205
A;Molecule type: mRNA
A;Residues: 78-155 <GOZ>
A;Cross-references: UNIPARC:UPI000016B2F8; GB:M31645; GB:M32162; NID:G340250; PIDN:AAA611
A;Note: This abundant mRNA from a human buccal tumor line contains an unspliced intron
R;Linder, S.; Barkhem, T.; Norberg, A.; Persson, H.; Schalling, M.; Hokfelt, T.; Magnusson
Proc. Natl. Acad. Sci. U.S.A. 84, 605-609, 1987
A>Title: Structure and expression of the gene encoding the vasoactive intestinal peptide
A;Reference number: A26361; MUID:87092456; PMID:3025882
A;Accession: A26361
A;Molecule type: DNA
A;Residues: 1-115, 'L', 117-135, 'G', 137-170 <LIN>
A;Cross-references: UNIPARC:UPI000016B2FA; GB:M14623; NID:G340271; PIDN:AAA61288.1; PID:
A;Note: the authors translated the codon TTA for residue 116 as Ser and GGC for residue 1
R;Xiangou, Y.; Di Marzo, V.; Spokes, R.A.; Panico, M.; Morris, H.R.; Bloom, S.R.
J. Biol. Chem. 262, 14010-14013, 1987
A>Title: Isolation, characterization, and pharmacological actions of peptide histidine va
A;Reference number: A27419; MUID:88007645; PMID:3654650
A;Accession: A27419
A;Molecule type: protein
A;Residues: 81-122 <YA>
A;Cross-references: UNIPARC:UPI00000351DE
R;Kitamura, K.; Kangawa, K.; Kawamato, M.; Ichiki, Y.; Matsuo, H.; Eto, T.

Biochem. Biophys. Res. Commun. 185, 134-141, 1992
A;Title: Isolation and characterization of peptides which act on rat platelets, from a p
A;Reference number: JH0618; MUID:92287083; PMID:1318039
A;Accession: JH0618
A;Molecule type: protein
A;Residues: 125-152 <KIT>
A;Cross-references: UNIPARC:UPI000002D1C0
R;Yanagami, T.; Ohsawa, K.; Nishizawa, M.; Inoue, C.; Gotoh, E.; Yanaiharu, N.; Yamamoto
Ann. N. Y. Acad. Sci. 527, 87-102, 1988
A;Title: Complete nucleotide sequence of human vasoactive intestinal peptide/PHM-27 gene
A;Reference number: 151955; MUID:8826775; PMID:2839091
A;Accession: 151955
A;Status: translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 1-170 <RES>
A;Cross-references: UNIPARC:UPI000003B343; GB:M33027; NID:g340253; PIDN:AAA69515.1; PID:
R;Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 47, 1136-1141, 1987
A;Title: Vasoactive intestinal peptide gene: Putative mechanism of information storage a
A;Reference number: 156494
A;Accession: 156494
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 78-155 <RE2>
A;Cross-references: UNIPARC:UPI00016B2F8; GB:M32162; NID:g340250; PIDN:AAA61285.1; PID:
R;Bloom, S.R.; Christofides, N.D.; Delamarier, J.; Buell, G.; Kawashima, E.; Polak, J.M.
Lancet 2, 1163-1165, 1983
A;Title: Diarrhoea in vipoma patients associated with cosecretion of a second active pep
A;Reference number: 156988; MUID:8406682; PMID:6139527
A;Accession: 156988
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: mRNA
A;Residues: 50-170 <R3>
A;Cross-references: UNIPARC:UPI000016B2F7; GB:M54930; NID:g340247; PIDN:AAA63268.1; PID:
C;Genetics:
A;Gene: GDB:VIP
A;Cross-references: GDB:120490; OMIM:192320
A;Map position: 6q26-6q27
A;Introns: 36/2; 77/2; 112/2; 156/2
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; glycoprotein; hormone; intestine; neurop
F;1-20/Domain: signal sequence #status predicted <SIG>
F;81-122/Product: peptide histidine-valine (PHV-42) #status experimental <PHV>
F;81-107/Product: peptide histidine-methionine (PHM-27) #status experimental <PHM>
F;125-152/Product: vasoactive intestinal peptide #status experimental <VIP>
F;168.133/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;107/Modified site: amidated carboxyl end (Met) (amide in mature form from following gl
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 90.7%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 6.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152
RESULT 9
VRRT
N;Contains: intestinal peptide precursor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 28-Feb-1986 #sequence_revision 30-Jun-1993 #text_change 09-Jul-2004
A;Accession: A60053; B60037; A01548; A28102; A60586; A60587; S09691
R;Giladi, E.; Shani, Y.; Gozes, I.
Brain Res. Mol. Brain Res. 7, 261-267, 1990
A;Title: The complete structure of the rat VIP gene.
A;Reference number: A60053; MUID:90244869; PMID:2159586
A;Accession: A60053
A;Molecule type: DNA
A;Residues: 1-170 <GIL>

A;Cross-references: UNIPROT:P01283; UNIPARC:UPI000013884A
A;Note: the authors translated the codon GAG for residue 67 as Gln
R;Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A;Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A;Reference number: A60037; MUID:91232388; PMID:1851524
A;Accession: B60037
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 78-155 <LAM>
A;Cross-references: UNIPARC:UPI0000173511
R;Nishizawa, M.; Hayakawa, Y.; Yanaiharu, N.; Okamoto, H.
FEBS Lett. 183, 55-59, 1985
A;Title: Nucleotide sequence divergence and functional constraint in VIP precursor mRNA
A;Reference number: A01548; MUID:85154612; PMID:3838518
A;Accession: A01548
A;Molecule type: mRNA
A;Residues: 9-170 <NIS>
A;Cross-references: UNIPARC:UPI0000170BA3; GB:X02341; NID:g57481; PIDN:CAA26200.1; PID:g
A;Experimental source: cerebral cortex
R;Goetzl, E.J.; Sreedharan, S.P.; Turck, C.W.
J. Biol. Chem. 263, 9083-9086, 1988
A;Title: Structurally distinctive vasoactive intestinal peptides from rat basophilic leu
A;Reference number: A28102; MUID:88243784; PMID:3379062
A;Accession: A28102
A;Molecule type: protein
A;Residues: 134-152 <GOE>
A;Cross-references: UNIPARC:UPI00000351E4
R;Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Rathe, J.; Robberecht, P.; Christ
Endocrinology 125, 1296-1302, 1989
A;Title: Peptide histidine isoleucineamide (PHI) - (1-27)-Gly as a new major form of PHI in
A;Reference number: A60586; MUID:89338237; PMID:2759027
A;Accession: A60586
A;Molecule type: protein
A;Residues: 81-108 <CAU>
A;Cross-references: UNIPARC:UPI0000173512
R;Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Robberecht, P.; Christophe, J.
Endocrinology 125, 2645-2655, 1989
A;Title: Variable distribution of three molecular forms of peptide histidine isoleucineam
A;Reference number: A60587; MUID:9005222; PMID:2792003
A;Accession: A60587
A;Molecule type: protein
A;Residues: 81-122 <CA2>
A;Cross-references: UNIPARC:UPI0000173513
R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gosse, D.; de Neef, P.; Rathe, J.; Robberecht, J.
Biochim. Biophys. Acta 1038, 355-359, 1990
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A;Reference number: S09688; MUID:90254163; PMID:2340294
A;Contents: annotation; comparison of mammalian PHI sequences
C;Comment: Two active peptides are released from the VIP precursor by cleavage at paired
C;Genetics:
A;Introns: 36/2; 77/2; 156/2
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone; i
F;1-21/Domain: signal sequence #status predicted <SIG>
F;81-122/Product: PHI-42 #status experimental <PH42>
F;81-108/Product: PHI-27-Gly #status experimental <PHIG>
F;81-107/Product: peptide histidine-isoleucine (PHI-27) #status predicted <PHI>
F;125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F;107/Modified site: amidated carboxyl end (file) (amide in mature form from following gly
F;133/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gly
Query Match 90.7%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 6.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152
1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

RESULT 10

A603037
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; glucagon; peptide precursor - mouse
N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Mus musculus (house mouse)
C:Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C:Accession: A603037; I49386
R:Ramperini, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A:Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A:Reference number: A603037; MUID:91232388; PMID:1851524
A:Accession: A603037
A:Status: not compared with conceptual translation
A:Molecule type: DNA
A:Residues: 1-170 <I>AM>
A:Cross-references: UNIPROT:P32648; UNIPARC:UPI000002171P
R:Sena, M.; Bravo, D.T.; Von Agoston, D.; Waschek, J.A.
DNA Seq. 5, 25-29, 1994
A:Title: High conservation of upstream regulatory sequences on the human and mouse vasoactive intestinal peptide precursor - chicken
A:Accession: I49386
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 1-35 <RES>
A:Cross-references: UNIPARC:UPI000016D189; EMBL:X74297; NID:9895871; PIDN:CAAS2350.1; PIDN:CAAS2350.1; PIDN:CAAS2350.1
C:Comment: Two active peptides are released from the VIP precursor by cleavage at paired basic residues
C:Genetics:
A:Gene: VIP
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone; glucagon; peptide precursor - mouse
F:1-21/Domain: signal sequence #status predicted <SIG>
F:81-107/Product: PHI-27 #status predicted <PHI>
F:125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F:107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
F:133/Binding site: carboxylate (Asn) (covalent) #status predicted
F:152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl

Query Match 90.7%; Score 136; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 6.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

RESULT 11

VRGP
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; glucagon; peptide precursor - guinea pig (fragments)
N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Cavia porcellus (guinea pig)
C:Date: 31-Mar-1988 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
C:Accession: A26175; S09688; A57082; B60304
R:Du, B.H.; Eng, J.; Hulmes, J.D.; Chang, M.; Pan, Y.C.E.; Yalow, R.S.
Biochem. Biophys. Res. Commun. 128, 1093-1098, 1985
A:Title: Guinea pig has a unique mammalian VIP.
A:Reference number: A26175; MUID:85225523; PMID:4004849
A:Accession: A26175
A:Molecule type: protein
A:Residues: 28-55 <DUB>
A:Cross-references: UNIPROT:P04566; UNIPARC:UPI0000035182
R:Buscail, L.; Cauvin, A.; Gourlet, P.; Gossens, D.; de Neef, P.; Robberecht, R.
Biochim. Biophys. Acta 1038, 355-359, 1990
A:Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A:Reference number: S09688; MUID:90254163; PMID:2340294
A:Accession: S09688
A:Molecule type: protein
A:Residues: 1-27 <BUS>
A:Cross-references: UNIPARC:UPI0000173516
A:Accession: A57082
A:Molecule type: protein
A:Residues: 28-55 <BU2>
A:Cross-references: UNIPARC:UPI0000173516

C:Superfamily: glucagon

C:Keywords: amidated carboxyl end; duplication; hormone; glucagon; peptide precursor - guinea pig (fragments)
F:1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F:125-152/Product: vasoactive intestinal peptide #status experimental <VIP>
F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F:55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental
Query Match 82.0%; Score 123; DB 1; Length 55;
Best Local Similarity 82.1%; Pred. No. 1.4e-10;
Matches 23; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
DB 28 HSDALFTDTYTLRKQMAVKKYLNSVLN 55

RESULT 12

VRCH
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; glucagon; peptide precursor - chicken
C:Species: Gallus gallus (chicken)
C:Date: 24-Apr-1984 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C:Accession: S47470; A91425; A90720; A01551
R:Talbot, R.T.; Dunn, I.C.; Wilson, P.W.; Sang, H.M.; Sharp, P.J.
Submitted to the EMBL Data Library, August 1984
A:Description: Evidence for alternative splicing of the chicken VIP gene.
A:Reference number: S47470
A:Accession: S47470
A:Molecule type: mRNA
A:Residues: 1-165 <TAL>
A:Cross-references: UNIPROT:P48143; UNIPARC:UPI000002B6C3; EMBL:X80906; NID:G531364; PIDN:CAAS2350.1
R:Nilsson, A.
FEBS Lett. 60, 322-326, 1975
A:Title: Structure of the vasoactive intestinal octacosapeptide from chicken intestine.
A:Reference number: A91425; MUID:76210823; PMID:1227973
A:Accession: A91425
A:Molecule type: protein
A:Residues: 94-121 <NIL>

Query Match 80.7%; Score 121; DB 1; Length 165;
Best Local Similarity 85.2%; Pred. No. 8.4e-10;
Matches 23; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSIL 27
DB 94 HSDAVFTDNYTLRKQMAVKKYLNSVL 120

RESULT 13

A60303
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; glucagon; peptide precursor - smaller spotted catshark
F:1-25/Domain: signal sequence #status predicted <SIG>
F:94-121/Product: vasoactive intestinal peptide #status experimental <MAT>
F:121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following gl
Query Match 80.7%; Score 121; DB 1; Length 165;
Best Local Similarity 85.2%; Pred. No. 8.4e-10;
Matches 23; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSIL 27
DB 94 HSDAVFTDNYTLRKQMAVKKYLNSVL 120

RESULT 13

A60303
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; glucagon; peptide precursor - smaller spotted catshark
F:1-25/Domain: signal sequence #status predicted <SIG>
F:94-121/Product: vasoactive intestinal peptide #status experimental <MAT>
F:121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following gl
Query Match 80.7%; Score 121; DB 1; Length 165;
Best Local Similarity 85.2%; Pred. No. 8.4e-10;
Matches 23; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSIL 27
DB 94 HSDAVFTDNYTLRKQMAVKKYLNSVL 120

```

A:Accession: JQ0361
A:Molecule type: protein
A:Residues: 1-25 <HW>
A:Cross-references: UNIPROT:P09584; UNIPARC:UPI0000138847
C:Superfamily: glucagon
C:keywords: duplication; intestine; neuropeptide

Query Match      73.3%; Score 110; DB 2; Length 25;
Best Local Similarity 84.0%; Pred. No. 4.2e-09;
Matches 21; Conservative 1; Mismatches 3; Indels

Qy 1 HWDVFTDNYRLRKQMAVKYLYNS 25
    | | | | | | | | | | | | | |
Db 1 HSDAVFTDNYSRFRKQMAAKYLYNS 25

Search completed: January 25, 2006, 15:20:36
Job time : 14.25 secs

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RESULT 2
ID - VIP_CAPHI STANDARD; PRT; 28 AA.
AC P63290; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name=VIP;
OS Capra hircus (Goat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Capra.
OX NCBI_TaxID=9925;
RN [1]
RP PROTEIN SEQUENCE.
RX MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;
RA Eng J.; Du B.-H.; Raufman J.-P.; Yalow R.S.;
RT VIPs.;
RL Peptides 7 Suppl. 1:17-20(1986).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR HSSP; P18509; 1GEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD_RES 28 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313PB573FF6F3F CRC64;

Query Match 90.7%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.9e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HMDAVFTDNYTRLRKQMAVKYKYLNSILN 28
DB 1 HSDAVFTDNYTRLRKQMAVKYKYLNSILN 28

RESULT 4
VIP_SHEEP STANDARD; PRT; 28 AA.
AC P63291; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name=VIP;
OS Ovis aries (Sheep).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Ovis.
OX NCBI_TaxID=9940;
RN [1]
RP PROTEIN SEQUENCE.
RX MEDLINE=91045331; PubMed=2235680; DOI=10.1016/0196-9781(90)90184-7;
RA Gafvelin G.;
RT "Isolation and primary structure of VIP from sheep brain.";
RL Peptides 11:703-706(1990).
RN [2]
RP PROTEIN SEQUENCE.
RC TISSUE=Small intestine;
RX MEDLINE=91239834; PubMed=2034821; DOI=10.1016/0167-0115(91)90044-H;
RA Bounjou Y., Vandermeers A., Robberecht P., Vandermeers-Piret M.C.,
RA Christophe J.;
RT "Purification and amino acid sequence of vasoactive intestinal
RT peptide, peptide histidine isoleucineamide and secretin from the ovine
RT small intestine.";
RL Regul. Pept. 32:169-179(1991).
RN [3]
RP PROTEIN SEQUENCE.
RC TISSUE=Hypothalamus, and Intestine;
RX PubMed=1574609; DOI=10.1016/0167-0115(92)90053-W;
RA Miyata A., Jiang L., Stibbs H.H., Arimura A.;
RT "Chemical characterization of vasoactive intestinal polypeptide-like
RT immunoreactivity in ovine hypothalamus and intestine.";

```

RL Regul. Pept. 38:145-154(1992).
 CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycogenolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: Belongs to the glucagon family.
 CC -----
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC -----
 CC PIR: B60072; VRSH.
 DR HSSP: P18509; IGEA.
 DR InterPro: IPR000532; Glucagon.
 DR Pfam: PF00123; Hormone 2; 1.
 DR PRINTS: PR00275; GLUCAGON.
 DR SMART: SM00070; GLUCA; 1.
 DR PROSITE: PS00260; GLUCAGON; 1.
 KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
 FT MOD RES 28 Asparagine amide.
 SQ SEQUENCE 28 AA; 3327 MW; EF313FB573PF6F3P CRC64;

 Query Match 90.7%; Score 136; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 5.9e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

 QY 1 HWDVFTDNYTRLRQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRQMAVKKYLNSILN 28

 RESULT 5
 ID VIP_PIG STANDARD; PRT; 72 AA.
 AC P01284; Q9TRN0;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 21-JUL-1986 (Rel. 01, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
 DE histidine isoleucinamide 27); Vasoactive intestinal peptide (VIP)
 DE (Vasoactive intestinal polypeptide)] (Fragment).
 GN Name=VIP;
 OS Sus scrofa (Pig).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
 OC Sus;
 OX NCBI_TaxID=9823;
 RN [1]
 RP PROTEIN SEQUENCE OF 1-27.
 RX MEDLINE=82082498; PubMed=6947244;
 RA Tatamoto K., Mutt V.;
 RT "Isolation and characterization of the intestinal peptide porcine PHI
 RT (PHI-27), a new member of the glucagon-secretin family.";
 RL Proc. Natl. Acad. Sci. U.S.A. 78:6603-6607(1981).
 RN [2]
 RP PROTEIN SEQUENCE OF 1-24.
 RC TISSUE=Duodenum;
 RX MEDLINE=93038640; PubMed=1329741;
 RA Ichiki Y., Kitamura K., Kangawa K., Kawamoto M., Matsuo H., Eto T.;
 RT "Organ distribution and characterization of porcine peptides (VIP,
 RT CGRP and PHI) that increase cAMP in rat platelets";
 RL Biochem. Biophys. Res. Commun. 187:1587-1593(1992).
 RN [3]
 RP PROTEIN SEQUENCE OF 28-58.
 RX MEDLINE=88335763; PubMed=2843830; DOI=10.1016/0196-9781(88)90149-0;
 RA Gavellin G., Andersson M., Dimoline R., Jorvall H., Mutt V.;
 RT "Isolation and characterization of a variant form of vasoactive
 RT intestinal polypeptide.";
 RL Peptides 9:469-474(1988).
 RN [4]
 RP PROTEIN SEQUENCE OF 45-72.

RX MEDLINE=74167323; PubMed=4829446;
 RA Mutt V., Said S.I.;
 RT "Structure of the porcine vasoactive intestinal octacosapeptide. The
 RT amino-acid sequence. Use of kallikrein in its determination.";
 RL Eur. J. Biochem. 42:581-589(1974).
 RN [5]
 RP SYNTHESIS OF VIP.
 RX MEDLINE=74308014; PubMed=4854585;
 RA Bodanszky M., Klausner Y.S., Lin C.Y., Mutt V., Said S.I.;
 RT "Synthesis of the vasoactive intestinal peptide (VIP).";
 RL J. Am. Chem. Soc. 96:4973-4978(1974).
 CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycogenolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -!- FUNCTION: PHI also causes vasodilation.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
 CC with the human precursor sequence.
 CC -!- SIMILARITY: Belongs to the glucagon family.
 CC -----
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 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
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 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC -----
 CC PIR: A01549; VRPG.
 DR HSSP: P18509; IGEA.
 DR InterPro: IPR000532; Glucagon.
 DR Pfam: PF00123; Hormone 2; 2.
 DR PRINTS: PR00275; GLUCAGON.
 DR PROSITE: PS00260; GLUCAGON; 2.
 KW Amidation; Cleavage on pair of basic residues;
 KW Direct protein sequencing; Glucagon family; Hormone.
 FT PEPTIDE 1 27 Intestinal peptide PHI-27.
 FT PEPTIDE 45 72 Vasoactive intestinal peptide.
 FT MOD RES 27 27 Isoleucine amide.
 FT MOD RES 72 72 Asparagine amide.
 FT NON TER 1 1
 FT NON TER 72 72
 SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;

 Query Match 90.7%; Score 136; DB 1; Length 72;
 Best Local Similarity 96.4%; Pred. No. 1.7e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

 QY 1 HWDVFTDNYTRLRQMAVKKYLNSILN 28
 DB 45 HSDAVFTDNYTRLRQMAVKKYLNSILN 72

 RESULT 6
 ID VIP_RABIT STANDARD; PRT; 72 AA.
 AC P32649;
 DT 01-OCT-1993 (Rel. 27, Created)
 DT 01-OCT-1993 (Rel. 27, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
 DE histidine isoleucinamide 27); Vasoactive intestinal peptide (VIP)
 DE (Vasoactive intestinal polypeptide)] (Fragment).
 GN Name=VIP;
 OS Oryctolagus cuniculus (Rabbit).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
 OC Oryctolagus.
 OX NCBI_TaxID=9986;
 RN [1]
 RP PROTEIN SEQUENCE.
 RC TISSUE=Small intestine;
 RX MEDLINE=90259845; PubMed=2342988; DOI=10.1016/0196-9781(90)90120-T;
 RA Gossen D., Buscall L., Cauvin A., Gourlet P., de Neef P., Rathe J.,
 RA Robberecht P., Vandermeers-Piret M.C., Vandermeers A., Christophe J.;

"Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine";
 RL Peptides 11:123-128 (1990).
 CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -!- FUNCTION: PHI also causes vasodilation.
 CC -!- SURCELLULAR LOCATION: Secreted.
 CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.
 CC -!- SIMILARITY: Belongs to the glucagon family.
 CC -----
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 CC -----
 CC HSSP: P18509; 1GEA.
 DR InterPro: IPR000532; Glucagon.
 DR Pfam: PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 KW Amidation; Cleavage on pair of basic residues;
 KW Direct protein sequencing; Glucagon family; Hormone.
 FT PEPTIDE 1 27 Intestinal peptide PHI-27.
 FT PEPTIDE 45 72 Vasoactive intestinal peptide.
 FT MOD_RES 27 27 Isoleucine amide.
 FT MOD_RES 72 72 Asparagine amide.
 FT NON_TER 1 1
 FT NON_TER 72 72
 SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;
 Query Match 90.7%; Score 136; DB 1; Length 72;
 Best Local Similarity 96.4%; Pred. No. 1.7e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HWDVFTDNTYRLRKQMAVKKYLNSILN 28
 Db 45 HSDAVFTDNTYRLRKQMAVKKYLNSILN 72
 RESULT 7
 Q5TCV7 HUMAN
 ID Q5TCV7_HUMAN PRELIMINARY; PRT; 118 AA.
 AC Q5TCV7;
 DT 01-FEB-2005 (TrEMBLrel. 29, Created)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
 DE Vasoactive intestinal peptide (Fragment).
 GN Name=VIP; ORFNames=RP4-546K19.1-003;
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
 OC Homo.
 OX NCBI_TaxID=9606;
 RN [1]_TaxID=9606;
 RP NUCLEOTIDE SEQUENCE.
 RA Johnson C.;
 RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AL133356; CA121766.1; -; Genomic DNA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR SMART; SM00070; GLUCA; 2.
 DR PROSITE; PS00260; GLUCAGON; 2.
 FT NON_TER 1 1
 SQ SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;
 Query Match 90.7%; Score 136; DB 2; Length 118;
 Best Local Similarity 96.4%; Pred. No. 2.9e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HWDVFTDNTYRLRKQMAVKKYLNSILN 28
 Db 74 HSDAVFTDNTYRLRKQMAVKKYLNSILN 101
 RESULT 8
 Q7M2Y9 MACFA
 ID Q7M2Y9_MACFA PRELIMINARY; PRT; 145 AA.
 AC Q7M2Y9;
 DT 01-MAR-2004 (TrEMBLrel. 26, Created)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
 DE Vasoactive intestinal peptide precursor (Fragment).
 OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 OC Cercopitheidae; Cercopithecinae; Macaca.
 OX NCBI_TaxID=9541;
 RN [1]_TaxID=9541;
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=91203476; PubMed=1850073; DOI=10.1016/0169-328X(91)90145-N;
 RA Benson D.L.; Isackson P.J.; Jones E.G.;
 RT "In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey and rat neocortex.";
 RL Brain Res. Mol. Brain Res. 9:169-174(1991).
 DR PIR; A60038; A60038.
 DR HSSP; P18509; 1GEA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 FT NON_TER 1 1
 FT NON_TER 145 145
 SQ SEQUENCE 145 AA; 16324 MW; 1ABESD98D53FESC CRC64;
 Query Match 90.7%; Score 136; DB 2; Length 145;
 Best Local Similarity 96.4%; Pred. No. 3.6e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HWDVFTDNTYRLRKQMAVKKYLNSILN 28
 Db 100 HSDAVFTDNTYRLRKQMAVKKYLNSILN 127
 RESULT 9
 Q7TSR4 9MURI
 ID Q7TSR4_9MURI PRELIMINARY; PRT; 153 AA.
 AC Q7TSR4;
 DT 01-OCT-2003 (TrEMBLrel. 25, Created)
 DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
 DE Vasoactive intestinal polypeptide (Fragment).
 OS Arvicanthia ansorgei.
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
 OC Muridae; Murinae; Arvicanthis.
 OX NCBI_TaxID=204747;
 RN [1]_TaxID=204747;
 RP NUCLEOTIDE SEQUENCE.
 RA Dardente H.; Menet J.S.; Tournier B.B.; Challet E.; Pavet P.;
 RA Masson-Pevet M.;
 RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AY225375; AAP15167.1; -; mRNA.
 DR HSSP; P18509; 1GEA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR PRINTS; PR00275; GLUCAGON.
 DR

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DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON_TER 1
SQ SEQUENCE 153 AA; 17171 MW; 9C15095D6E147A15 CRC64;

Query Match          90.7%; Score 136; DB 2; Length 153;
Best Local Similarity 96.4%; Pred. No. 3.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 108 HSDAVFTDNYTLRKQMAVKKYLNSILN 135

RESULT 10
Q5TCY8_HUMAN
AC Q5TCY8_HUMAN PRELIMINARY; PRT; 169 AA.
DT 01-FEB-2005 (TRENBLrel. 29, Created)
DT 01-FEB-2005 (TRENBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TRENBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-002;
OS Homo sapiens (Human)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CAI21765.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 169 AA; 19081 MW; F325BDFEF47132C3 CRC64;

Query Match          90.7%; Score 136; DB 2; Length 169;
Best Local Similarity 96.4%; Pred. No. 4.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 124 HSDAVFTDNYTLRKQMAVKKYLNSILN 151

RESULT 11
VIP_BOVIN
ID VIP_BOVIN STANDARD; PRT; 170 AA.
AC P81401; Q8MI77;
DT 15-DEC-1998 (Rel. 37, Created)
DT 25-OCT-2004 (Rel. 45, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
DE (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Bos taurus (Bovine)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=20292342; PubMed=12097482;
RA Hamelink C., Lee H.-W., Chen Y., Grimaldi M., Eiden L.E.;
RT "Coincident elevation of cAMP and calcium influx by PACAP-27
RT synergistically regulates vasoactive intestinal polypeptide gene
RT transcription through a novel PKA-independent signaling pathway.";
RL J. Neurosci. 22:5310-5320(2002).
RN [2]
RP PROTEIN SEQUENCE OF 81-107.
RC TISSUE=Duoenum;

RX MEDLINE=85027215; PubMed=6548446;
RA Carlquist M., Kaiser R., Tatemoto K., Joernvall H., Mutt V.;
RT "A novel form of the polypeptide PHI isolated in high yield from
RT bovine upper intestine. Relationships to other peptides of the
RT glucagon-secretin family.";
RL Eur. J. Biochem. 144:243-247(1984).
RN [3]
RP PROTEIN SEQUENCE OF 125-152.
RC TISSUE=Intestine;
RX MEDLINE=80092152; PubMed=520589; DOI=10.1016/0014-5793(79)80587-6;
RA Carlquist M., Mutt V., Joernvall H.;
RT "Isolation and characterization of bovine vasoactive intestinal
RT peptide (VIP).";
RL FEBS Lett. 108:457-460(1979).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; AF503910; AAM28152.1; -; mRNA.
CC HSSP; P18509; IGEA.
CC InterPro; IPR000532; Glucagon.
CC Pfam; PF00123; Hormone 2; 2.
CC PRINTS; PR00275; GLUCAGON.
CC SMART; SM00070; GLUCA; 2.
CC PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 25
FT PROPEP 26 79
FT PEPTIDE 81 107 Intestinal peptide PHI-27.
FT PROPEP 111 122
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide
FT SEQUENCE 170 AA; 19165 MW; 9C6A6049AF7BFF81 CRC64;

Query Match          90.7%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 4.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

RESULT 12
VIP_HUMAN
ID VIP_HUMAN STANDARD; PRT; 170 AA.
AC P01282; Q96QK3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHV-42;
DE intestinal peptide PHM-27 (Peptide histidine methioninamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=VIP;
OS Homo sapiens (Human)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

```

CC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;
CC Homo.
CC NCBI_TaxID=9606;
RN [1] NUCLEOTIDE SEQUENCE.
RX MEDLINE=84066682; PubMed=6139527; DOI=10.1016/S0140-6736(83)91215-1;
RA Bloom S.R., Delamarter J.F., Kawashima E., Cristofides N.D.,
RA Buell G., Polak J.M.;
RT "Diarrhoea in vipoma patients associated with cosecretion of a second
RT active peptide (peptide histidine isoleucine) explained by single
RT coding gene.";
RL Lancet 2:1163-1165(1983).
RN [9]
RN NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=87140054; PubMed=2434617;
RA Gozes I., Giladi E., Shani Y.;
RA "Vasoactive intestinal peptide gene: putative mechanism of information
RT storage at the RNA level.";
RL J. Neurochem. 47:1136-1141(1987).
RN [10]
RN PROTEIN SEQUENCE OF 81-122.
RX MEDLINE=88007645; PubMed=3654650;
RA Yangou Y., di Marzo V., Spokes R.A., Panico M., Morris H.R.,
RA Bloom S.R.;
RT "Isolation, characterization, and pharmacological actions of peptide
RT histidine valine 42, a novel prepro-vasoactive intestinal peptide-
RT derived peptide.";
RL J. Biol. Chem. 262:14010-14013(1987).
RN [11]
RN PROTEIN SEQUENCE OF 127-152.
RX TISSUE=Pheochromocytoma;
RA MEDLINE=92287083; PubMed=1318039;
RA Kitamura K., Kangawa K., Kawamoto M., Ichiki Y., Matsuo H., Eto T.;
RT "Isolation and characterization of peptides which act on rat
RT platelets, from a pheochromocytoma.";
RL Biochem. Biophys. Res. Commun. 185:134-141(1992).
RN [12]
RN STRUCTURE BY NMR OF VIP.
RX MEDLINE=91322343; PubMed=1863695;
RA Theriault Y., Boulanger Y., St Pierre S.;
RT "Structural determination of the vasoactive intestinal peptide by two-
RT dimensional H-NMR spectroscopy.";
RL Biopolymers 31:459-464(1991).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHM and PHV also cause vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; L00157; AAA61289.1; -; Genomic_DNA.
DR EMBL; L00154; AAA61289.1; JOINED; Genomic_DNA.
DR EMBL; L00155; AAA61289.1; JOINED; Genomic_DNA.
DR EMBL; L00156; AAA61289.1; JOINED; Genomic_DNA.
DR EMBL; M33027; AAA69515.1; -; Genomic_DNA.
DR EMBL; M11553; AAA61284.1; -; Genomic_DNA.
DR EMBL; M11549; AAA61284.1; JOINED; Genomic_DNA.
DR EMBL; M11550; AAA61284.1; JOINED; Genomic_DNA.
DR EMBL; M11551; AAA61284.1; JOINED; Genomic_DNA.
DR EMBL; M11552; AAA61284.1; JOINED; Genomic_DNA.
DR EMBL; M14623; AAA61288.1; -; Genomic_DNA.
DR EMBL; M14619; AAA61288.1; JOINED; Genomic_DNA.
DR EMBL; M14620; AAA61288.1; JOINED; Genomic_DNA.
DR EMBL; M14621; AAA61288.1; JOINED; Genomic_DNA.
DR EMBL; M14622; AAA61288.1; JOINED; Genomic_DNA.
DR EMBL; M36610; AAA61286.1; -; Genomic_DNA.
DR EMBL; M36606; AAA61286.1; JOINED; Genomic_DNA.
DR EMBL; M36607; AAA61286.1; JOINED; Genomic_DNA.
DR EMBL; M36608; AAA61286.1; JOINED; Genomic_DNA.
DR EMBL; M36609; AAA61286.1; JOINED; Genomic_DNA.
DR EMBL; BC009794; AAH09794.1; -; mRNA.
DR EMBL; M36634; AAA61287.1; -; mRNA.
RX Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;
RX Homo.
RX NCBI_TaxID=9606;
RN [1] NUCLEOTIDE SEQUENCE.
RX MEDLINE=83271523; PubMed=6571596;
RA Itoh N., Obata K.-I., Yanaihara N., Okamoto H.;
RT "Human preprovasoactive intestinal polypeptide contains a novel PHI-
RT 27-like peptide, PHM-27.";
RL Nature 304:547-549(1983).
RN [2]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=88267775; PubMed=2839091;
RA Yamagami T., Ohsawa K., Nishizawa M., Inoue C., Gotoh E.,
RA Yanaihara N., Yamamoto H., Okamoto H.;
RT "Complete nucleotide sequence of human vasoactive intestinal
RT peptide/PHM-27 gene and its inducible promoter.";
RL Ann. N. Y. Acad. Sci. 527:87-102(1988).
RN [3]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=86004065; PubMed=3899557;
RA Tsukada T., Horovitch S.J., Montminy M.R., Mandel G., Goodman R.H.;
RT "Structure of the human vasoactive intestinal polypeptide gene.";
RL DNA 4:293-300(1985).
RN [4]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=87092456; PubMed=3025082;
RA Linder S., Barkham T., Norberg A., Persson H., Schalling M.,
RA Hoekfelt T., Magnusson G.;
RT "Structure and expression of the gene encoding the vasoactive
RT intestinal peptide precursor.";
RL Proc. Natl. Acad. Sci. U.S.A. 84:605-609(1987).
RN [5]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=86016352; PubMed=2995945; DOI=10.1016/0196-9781(85)90016-6;
RA Delamarter J.F., Buell G.N., Kawashima E., Polak J.M., Bloom S.R.;
RT "Vasoactive intestinal peptide: expression of the prohormone in
RT bacterial cells.";
RL Peptides 6:95-102(1985).
RN [6]
RN NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RX TISSUE=Prostate;
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Srausberg R.L., Feingold E.A., Grouse L.H., Dege J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shermen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buettow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Uadin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
RA Boek S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Vallalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahy J., Helton E., Young A.C., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield A.S., Krzywinski M.I., Skalska U., Smailus D.E.,
RA Schnerch A., Schein J.B., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [7]
RN NUCLEOTIDE SEQUENCE OF 8-170.
RX MEDLINE=86313155; PubMed=3748844; DOI=10.1016/0196-9781(86)90156-7;
RA Gozes I., Bodener M., Shani Y., Fridkin M.;
RT "Structure and expression of the vasoactive intestinal peptide (VIP)
RT gene in a human tumor.";
RL Peptides 7:1-6(1986).
RN [8]
RN NUCLEOTIDE SEQUENCE OF 50-170.
RX TISSUE=Pancratic carcinoma;
RN

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DR EMBL; M54930; AAA63268.1; -; mRNA.
DR EMBL; M32162; AAA61285.1; -; Genomic DNA.
DR EMBL; M31645; AAA61285.1; JOINED; Genomic DNA.
DR PIR; A23296; VRHU.
DR HSP; P18509; 1GEA.
DR Ensembl; ENSG00000146469; Homo sapiens.
DR HGNC; HGNC:12693; VIP.
DR H-InvDB; HIX0006306; -.
DR MIM; 192320; -.
DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
DR GO; GO:0007589; P:fluid secretion; TAS.
DR GO; GO:0007186; P:G-protein coupled receptor protein signaling. .; TAS.
DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 20 Potential.
FT PROPEP 21 79
FT PEPTIDE 81 122 Intestinal peptide PHV-42.
FT PEPTIDE 81 107 Intestinal peptide PHM-27.
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152 Methionine amide (G-108 provides amide group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group).
FT CONFLICT 96 97 QL -> PP (in Ref. 7).
FT CONFLICT 113 113 Missing (in Ref. 6).
FT CONFLICT 116 116 S -> L (in Ref. 4).
FT CONFLICT 136 136 R -> G (in Ref. 4).
SQ SEQUENCE 170 AA; 19169 MW; 93EC0177F89508FD CRC64;

Query Match 90.7%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 4.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKYLSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKYLSILN 152

RESULT 13
VIP_MOUSE STANDARD; PRT; 170 AA.
AC P32648;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=Vip;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=9123238; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lamperti E.D., Roben K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
RT polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 1-36.
RC STRAIN=C57BL/6; TISSUE=Spleen;
RX MEDLINE=95201289; PubMed=7894056;
RA Sena M., Bravo D.T., Agoston D., Waschek J.A.;

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RT "High conservation of upstream regulatory sequences on the human and
RT mouse vasoactive intestinal peptide (VIP) genes.";
RL DNA Seq. 5:25-29(1994).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHM also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; X74297; CAA52350.1; -; Genomic DNA.
DR PIR; A60037; A60037.
DR HSP; P18509; 1GEA.
DR Ensembl; ENSMUSG00000019772; Mus musculus.
DR MGI; MGI:98933; Vip.
DR GO; GO:0005615; C:extracellular space; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues; Glucagon family;
KW Glycoprotein; Hormone; Signal.
FT SIGNAL 1 21 By similarity.
FT PROPEP 22 79
FT PEPTIDE 81 122 Intestinal peptide PHI-42 (By
FT PEPTIDE 81 107 similarity).
FT PEPTIDE 125 152 Intestinal peptide PHI-27.
FT PROPEP 156 170 Vasoactive intestinal peptide.
FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide
FT MOD_RES 152 152 group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide
FT CARBOHYD 133 133 N-linked (GlcNAc...) (Potential).
SQ SEQUENCE 170 AA; 19049 MW; 0164C831F8F5C73D CRC64;

Query Match 90.7%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 4.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKYLSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKYLSILN 152

RESULT 14
VIP_RAT STANDARD; PRT; 170 AA.
AC P01283;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=Vip;
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=90244869; PubMed=2159586; DOI=10.1016/0169-328X(90)90036-D;
RA Giladi E., Shani Y., Gozes I.;
RT "The complete structure of the rat VIP gene.";

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RL Brain Res. Mol. Brain Res. 7:261-267(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 9-170.
RC TISSUE=Brain cortex;
RX MEDLINE=85154612; PubMed=383818; DOI=10.1016/0014-5793(85)80953-4;
RA Nishizawa M., Hayakawa Y., Yanaiharu N., Okamoto H.;
RT "Nucleotide sequence divergence and functional constraint in VIP
RT precursor mRNA evolution between human and rat.";
RL FEBS Lett. 183:55-59(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
RT polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [4]
RP PROTEIN SEQUENCE OF 134-152.
RX MEDLINE=88243784; PubMed=3379062;
RA Goetzl E.J., Sreedharan S.P., Turk C.W.;
RT "Structurally distinctive vasoactive intestinal peptides from rat
RT basophilic leukemia cells.";
RL J. Biol. Chem. 263:9083-9086(1988).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC EMBL; X02341; CA226200.1; -; mRNA.
DR FIR; A60053; VNR.
DR HSSP; P18509; LGEA.
DR Ensembl; ENSRNOG00000018908; Rattus norvegicus.
DR RGD; 621647; Vip.
DR GO; GO:0042311; P:vasodilation; NAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;
KW Signal.
FT SIGNAL. 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT Intestinal peptide PHV-42 (By
FT similarity).
FT PEPTIDE 81 107
FT Intestinal peptide PHI-27.
FT PEPTIDE 125 152
FT Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107
FT Isoleucine amide (G-108 provides amide
FT group).
FT MOD_RES 152 152
FT Asparagine amide (G-153 provides amide
FT group).
FT CARBOHYD 68 68
FT N-linked (GLNAC. . .) (Potential).
FT CARBOHYD 133 133
FT N-linked (GLNAC. . .) (Potential).
SQ SEQUENCE 170 AA; 19079 MW; 202AE82EBBD190B CRC64;

Query Match 90.7%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 4.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTRLRKQMAVKKYLNSILN 152
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RESULT 15
Q5TCY9_HUMAN
ID Q5TCY9_HUMAN PRELIMINARY; PRT; 170 AA.
AC Q5TCY9;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORGNAMES=RP4-546K19.1-001;
OS Homo sapiens (Human)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CA121764.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 170 AA; 19168 MW; 93EC0177F89508FD CRC64;

Query Match 90.7%; Score 136; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 4.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTRLRKQMAVKKYLNSILN 152

Search completed: January 25, 2006, 15:18:38
Job time : 76 secs
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-2

Perfect score: 143

Sequence: 1 HSDAVFTNYTRLRKQMAVKYILNSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_21.*
1: Geneseqp1980s.*
2: Geneseqp1990s.*
3: Geneseqp2000s.*
4: Geneseqp2001s.*
5: Geneseqp2002s.*
6: Geneseqp2003as.*
7: Geneseqp2003bs.*
8: Geneseqp2004s.*
9: Geneseqp2005s.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	135	94.4	28	5	ABG94138 Human vas
2	135	94.4	28	5	ABG94139 Human vas
3	134	93.7	28	1	AAP10172 VIP. 3/20
4	134	93.7	28	1	AAP10172 VIP. 3/20
5	134	93.7	28	2	AAP71039 Sequence
6	134	93.7	28	2	AAR34943 Porcine v
7	134	93.7	28	2	AAR40272 Native VI
8	134	93.7	28	2	AAR53111 Bronchodi
9	134	93.7	28	2	AAR53110 Bronchodi
10	134	93.7	28	2	AAR87092 Vasoactiv
11	134	93.7	28	2	AAR83785 VIP. 2/19
12	134	93.7	28	2	AAR97810 Vasoactiv
13	134	93.7	28	2	AAR93023 Human glu
14	134	93.7	28	2	AAR65188 Vasoactiv
15	134	93.7	28	2	AAR66120 Human VIP
16	134	93.7	28	2	AAR66119 Mouse VIP
17	134	93.7	28	2	AAR66114 Rabbit VI
18	134	93.7	28	2	AAR66113 Macaque V
19	134	93.7	28	2	AAR66121 Pig VIP p
20	134	93.7	28	2	AAR66122 Goat VIP
21	134	93.7	28	2	AAR66115 Dog VIP p
22	134	93.7	28	2	AAR66112 Sheep VIP
23	134	93.7	28	2	AAR37791 Vasoactiv
24	134	93.7	28	2	AAR71677 Vasoactiv

25	134	93.7	28	2	AAY30769 Vasoactiv
26	134	93.7	28	2	AAY44196 Human vas
27	134	93.7	28	3	AAY94560 Vasoactiv
28	134	93.7	28	4	AAB85707 Peptide h
29	134	93.7	28	4	AAB85710 Peptide h
30	134	93.7	28	4	AAB91279 Vasoactiv
31	134	93.7	28	4	AAB91278 Vasoactiv
32	134	93.7	28	4	AAB12028 Porcine v
33	134	93.7	28	4	AAB37111 Human vas
34	134	93.7	28	4	AAG70459 Vasoactiv
35	134	93.7	28	4	AAB50845 Human pro
36	134	93.7	28	4	AAB50845 Porcine i
37	134	93.7	28	4	AAB45614 Native va
38	134	93.7	28	5	AAE19604 Human ste
39	134	93.7	28	5	AAE19627 Human vas
40	134	93.7	28	5	AAE19603 Human vas
41	134	93.7	28	5	ABB06677 Mammalian
42	134	93.7	28	5	ABU85989 Modified
43	134	93.7	28	5	AAB97783 Tumour sp
44	134	93.7	28	5	ABG94140 Human vas
45	134	93.7	28	5	ABG94141 Human vas

ALIGNMENTS

RESULT 1
ABG94138
ID ABG94138 standard; peptide; 28 AA.
XX AC ABG94138;
XX DT 27-NOV-2002 (first entry)
XX DE Human vasoactive intestinal polypeptide (VIP) analogue #186.
XX KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.
XX OS Unidentified.
XX PN US2002099003-A1.
XX PD 25-JUL-2002.
XX PF 13-AUG-2001; 2001US-00929818.
XX PR 28-OCT-1997; 97US-00959057.
XX PR 28-OCT-1997; 97US-00959064.
XX PR 27-OCT-1998; 98US-00181316.
XX PA (WILSON) WILSON L F.
XX PA (PLAC) PLACE V A.
XX PI Wilson LF, Place VA;
XX DR WPI; 2002-697729/75.
XX PT Treating sexual dysfunction in females comprises administering vasoactive
XX PT intestinal polypeptide or against to vagina and/or vulvar region.
XX PS Claim 19; Page; 19pp; English.
XX CC The invention relates to a method for treating sexual dysfunction in
XX CC females comprising administering a formulation comprising a vasoactive
XX CC agent comprising a vasoactive intestinal polypeptide and/or agonist to
XX CC the vagina and/or vulvar region. The method is used for preventing

XX The invention relates to a method for treating sexual dysfunction in
CC females comprising administering a formulation comprising a vasoactive
CC agent comprising a vasoactive intestinal polypeptide and/or agonist to

```
Query Match      93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 4
AAP71039
ID AAP71039 standard; peptide; 28 AA.
XX
AC AAP71039;
XX
DT 03-OCT-2002 (revised)
DT 05-APR-1991 (first entry)
XX
DE Sequence of active ingredient in hair growth promoting compsn.
XX
KW Vasoactive intestinal tract polypeptide; digestive tract polypeptide;
KW hair growth promoter.
XX
OS Synthetic.
XX
PN EP225639-A.
XX
PD 16-JUN-1987.
XX
PF 10-DEC-1986; 86EP-00117190.
XX
PR 10-DEC-1985; 85JP-00276099.
XX
PA (MEIJ ) MEIJI SEIKA KAISHA.
XX
PI Yanaihara N, Watanabe S, Kasai M, Sato T, Kikkoji T;
XX
DR WPI; 1987-164873/24.
XX
PT Hair growth promoting compsn. - contg. vasoactive intestinal polypeptide
PT and carrier.
XX
PS Claim 1; Page 8; 10pp; English.
XX
CC When applied to the skin, the peptide causes a local increase in blood
CC flow and promotes hair growth. It is the natural peptide known as
CC vasoactive intestinal polypeptide which has been isolated from the
CC digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)
XX
SQ Sequence 28 AA;

Query Match      93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 5
AAR34943
ID AAR34943 standard; peptide; 28 AA.
XX
AC AAR34943;
XX
XX
DT 25-MAR-2003 (revised)
DT 28-JUL-1993 (first entry)
XX
DE Porcine VIP.
XX
KW Vasoactive intestinal peptide; asthma; bronchodilation activity;
KW bronchiotracheal constrictive disorders.
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XX Sus scrofa.
OS
XX
PN EP536741-A2.
XX
PD 14-APR-1993.
XX
PF 08-OCT-1992; 92EP-00117195.
XX
PR 11-OCT-1991; 91US-00773747.
XX
PA (HOFF ) HOFFMANN LA ROCHE & CO AG F.
XX
PI Bolin DR, Odonnell M;
XX
DR WPI; 1993-118996/15.
XX
PT New cyclic vasoactive intestinal peptide (VIP) analogues - are useful for
PT the treatment of bronchiotracheal constrictive disorders e.g. asthma.
XX
PS Disclosure; Page 65; 141pp; English.
XX
CC The sequence is that of porcine vasoactive intestinal peptide (VIP) as
CC claimed in EP-325044. The peptide sequence was used to design cyclic
CC analogues of VIP which have enhanced bronchodilation activity without any
CC observable side effects such as cardiovascular side effects. The
CC bronchodilation produced by the analogues can be sustained for more than
CC two hours. The analogues may be used for the treatment of bronchiotracheal
CC constrictive disorders, e.g. asthma. See also RR3944-5016. (Updated on 25
CC -MAR-2003 to correct PN field.)
XX
SQ Sequence 28 AA;

Query Match      93.7%; Score 134; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 6
AAR40272
ID AAR40272 standard; protein; 28 AA.
XX
AC AAR40272;
XX
DT 25-MAR-2003 (revised)
DT 09-FEB-1994 (first entry)
XX
DE Native VIP.
XX
KW Vasoactive intestinal peptide; VIP; bronchodilator; cardiovascular;
KW side effect; bronchoconstrictive disorder; asthma.
XX
OS Sus scrofa.
XX
FH Key Location/Qualifiers
FT Modified-site 28
FT /note= "C-terminal is amidated"
XX
PN US5234907-A.
XX
PD 10-AUG-1993.
XX
PF 24-APR-1991; 91US-00690300.
XX
PR 30-JUN-1989; 89US-00374503.
XX
PA (HOFF ) HOFFMANN LA ROCHE INC.
XX
PI Bolin DR;
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XX DR WPI; 1993-264645/33.
XX PT New vasoactive intestinal peptide analogues - are potent bronchodilators
XX FT without cardiovascular side effects, used for treating, e.g. asthma.
XX PS Disclosure; Page 25-26; 66pp; English.
XX CC VIP (AAR40272) was used in the prodn. of analogues (AAR40273-78: generic
XX CC formulae; AAR40279-364: examples). The VIP analogues are potent
XX CC bronchodilators and have no cardiovascular side effects. They are used
XX CC for the treatment of bronchoconstrictive disorders, e.g. asthma. (Updated
XX CC on 25-MAR-2003 to correct PF field.)
XX SQ Sequence 28 AA;
    Query Match 93.7%; Score 134; DB 2; Length 28;
    Best Local Similarity 96.4%; Pred. No. 1.3e-10;
    Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYTRLRKQMAVKKYLNSILN 28

RESULT 7
AAR53111
ID AAR53111 standard; peptide; 28 AA.
AC AAR53111;
XX 20-DEC-1994 (first entry)
XX Bronchodilator peptide #21.
XX Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
XX selectively; toxicity; mammal; bronchodilator.
XX Synthetic.
XX Key Location/Qualifiers
XX Key Misc-difference 10 /note= "D-form residue"
XX FT Misc-difference 22 /note= "D-form residue"
XX FT Modified-site 28 /note= "Amidated C-terminal"
XX PN JP06092991-A.
XX PD 05-APR-1994.
XX PF 28-FEB-1991; 91JP-00034335.
XX PR 28-FEB-1991; 91JP-00034335.
XX PA (DAIL ) DAICEL CHEM IND LTD.
XX PA (MEIJ ) MEIJI SEIKA KAISHA.
XX DR WPI; 1994-147946/18.
XX PT Active peptide(s), having smooth muscle relaxing activity - useful as
XX FT bronchodilators.
XX PS Disclosure; Page 5; 29pp; Japanese.
XX CC The sequences given in AAR53091-111 are synthetic peptides based on
XX CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
XX CC the smooth muscle selectively and are only low toxic-non- toxic to
XX CC mammals. These peptides may be used as bronchodilators. They are prepared
XX CC by solid phase synthesis using a resin having an amino functional group
XX CC capable of bonding to the amino acid at the carboxy terminal through a
XX CC carboxyl group and fixing the peptide chain during the synthesis

XX SQ Sequence 28 AA;
    Query Match 93.7%; Score 134; DB 2; Length 28;
    Best Local Similarity 96.4%; Pred. No. 1.3e-10;
    Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYTRLRKQMAVKKYLNSILN 28

RESULT 9
AAR53110
ID AAR53110 standard; peptide; 28 AA.

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XX SQ Sequence 28 AA;
    Query Match 93.7%; Score 134; DB 2; Length 28;
    Best Local Similarity 96.4%; Pred. No. 1.3e-10;
    Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYTRLRKQMAVKKYLNSILN 28

RESULT 8
AAR53109
ID AAR53109 standard; peptide; 28 AA.
XX AAR53109;
XX 20-DEC-1994 (first entry)
XX Bronchodilator peptide #19.
XX Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
XX selectively; toxicity; mammal; bronchodilator.
XX Synthetic.
XX Key Location/Qualifiers
XX Key Misc-difference 10 /note= "D-form residue"
XX FT Misc-difference 28 /note= "Amidated C-terminal"
XX PN JP06092991-A.
XX PD 05-APR-1994.
XX PF 28-FEB-1991; 91JP-00034335.
XX PR 28-FEB-1991; 91JP-00034335.
XX PA (DAIL ) DAICEL CHEM IND LTD.
XX PA (MEIJ ) MEIJI SEIKA KAISHA.
XX DR WPI; 1994-147946/18.
XX PT Active peptide(s), having smooth muscle relaxing activity - useful as
XX FT bronchodilators.
XX PS Disclosure; Page 5; 29pp; Japanese.
XX CC The sequences given in AAR53091-111 are synthetic peptides based on
XX CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
XX CC the smooth muscle selectively and are only low toxic-non- toxic to
XX CC mammals. These peptides may be used as bronchodilators. They are prepared
XX CC by solid phase synthesis using a resin having an amino functional group
XX CC capable of bonding to the amino acid at the carboxy terminal through a
XX CC carboxyl group and fixing the peptide chain during the synthesis

XX SQ Sequence 28 AA;
    Query Match 93.7%; Score 134; DB 2; Length 28;
    Best Local Similarity 96.4%; Pred. No. 1.3e-10;
    Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYTRLRKQMAVKKYLNSILN 28

RESULT 10
AAR53110
ID AAR53110 standard; peptide; 28 AA.

```

[illegible]

XX PR 20-DEC-1993; 93JP-00319815.
XX PA (SANW) SANWA KAGAKU KENKYUSHO CO.
XX PI Noda H, Yamakawa H, Yoshina S, Ishida T, Tomiya N;
XX FI WPI; 1995-247502/33.
XX DR
XX PT New modified form of vasoactive intestinal polypeptide - with C-terminal
XX PT subetd. amide residue, has greater in vivo stability and persistence,
XX PT useful for treating asthma and impotence.
XX PS Disclosure; Page 3; 16pp; English.
XX CC This sequence represents vasoactive intestinal polypeptide (VIP). VIP is
XX CC a peptide hormone that shows smooth muscle relaxant activity. The
XX CC structure of VIP is similar to that of the other peptides in the glucagon
XX CC -secretin family, to which it belongs. VIP is present in the nervous
XX CC system and the digestive system tracts. It is also found in the lungs of
XX CC normal patients (however, it is not found in the lungs of people
XX CC suffering from bronchial asthma). The sequences shown in AAR83784 and
XX CC AAR83786 are analogues of this sequence. These analogues are found to be
XX CC resistant to protease digestion. The analogues can be used to treat
XX CC asthma (by inhalation) and impotence (percutaneously). Compared to
XX CC natural VIP, the analogue sequences have better in vivo stability. The
XX CC analogue sequences are also more persistent than natural VIP and have
XX CC excellent affinity for biological membranes
XX CC
XX CC Sequence 28 AA;
XX CC
Query Match 93.7%; Score 134; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
XX QY 1 HSDAVFTFNTLRKQMAVKKYLNSILN 28
XX Db 1 HSDAVFTDNTYLRKQMAVKKYLNSILN 28
XX
RESULT 12
AAR97810
ID AAR97810 standard; peptide; 28 AA.
XX AC AAR97810;
XX DT 22-AUG-1996 (first entry)
XX DE Vasoactive Intestinal Peptide VIP(1-28), for dermal ulcer treatment.
XX KW Vasoactive intestinal peptide; VIP; vasodilation; hyperkinemic; skin;
XX KW burn; decubitis; diabetes; ulcer; bedsores; pressure sore.
XX OS Synthetic.
XX XX
XX Key Location/Qualifiers
XX FT Modified-site 28
XX FT /note= "amidated"
XX
XX JP08040926-A.
XX PD 13-FEB-1996.
XX PF 03-AUG-1994; 94JP-00182457.
XX PR 03-AUG-1994; 94JP-00182457.
XX PA (YAKU-) YAKURIGAKU CHUO KENKYUSHO KK.
XX DR WPI; 1996-157021/16.
XX PT Remedy for dermal ulcer - comprises vasoactive intestinal polypeptide as
XX PT active component.

XX PS Claim 1; Page 2; 4pp; Japanese.
XX CC Vasoactive intestinal peptide and related compounds are known to have
XX CC strong vasodilatory activity. They have now been found to be effective in
XX CC the treatment of skin ulcers, esp. decubitus ulcers but also burn ulcers,
XX CC diabetic ulcers, etc. VIP(1-28) is the preferred peptide for use in the
XX CC novel skin ulcer remedy
XX CC
XX CC Sequence 28 AA;
XX CC
Query Match 93.7%; Score 134; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
XX QY 1 HSDAVFTFNTLRKQMAVKKYLNSILN 28
XX Db 1 HSDAVFTDNTYLRKQMAVKKYLNSILN 28
XX
RESULT 13
AAR93023
ID AAR93023 standard; protein; 28 AA.
XX AC AAR93023;
XX XX 09-AUG-1996 (first entry)
XX DT Human glucagon degrading enzyme - VIP substrate.
XX DE
XX KW Glucagon degrading enzyme; catalyst; cleavage; selectin; human; primer;
XX KW vasoactive intestinal peptide; VIP; pancreatic carcinoma cell line; PCR;
XX KW amplification; polymerase chain reaction; probe; expression vector;
XX KW eukaryote; SV40 promoter; COS-7.
XX OS Synthetic.
XX XX
XX Key Location/Qualifiers
XX FT Cleavage-site 17. .18
XX FT Modified-site 28
XX FT /note= "contains C-terminal amide group"
XX
XX JP08023972-A.
XX PD 30-JAN-1996.
XX PF 19-JUL-1994; 94JP-00187936.
XX PR 19-JUL-1994; 94JP-00187936.
XX PA (SUNR) SUNTORY LTD.
XX XX WPI; 1996-133414/14.
XX DR
XX PT New glucagon decomposing enzyme, and DNA encoding it - for specifically
XX PT cleaving glucagon and vasoactive intestinal peptide, in the prevention
XX PT and treatment of diseases caused by excess glucagon and VIP.
XX PS Claim 1; Page 2; 18pp; Japanese.
XX CC A novel gene encoding a glucagon degrading enzyme (GDE; AAT11575) was
XX CC isolated from a human pancreatic carcinoma cell line HPC-Yo cDNA library.
XX CC The enzyme has a mol. wt. 83 kD, a pH optimum of 6.8 and catalyses the
XX CC cleavage of glucagon, vasoactive intestinal peptide and selectin
XX CC (AAR93022-4). The gene encoding the enzyme was isolated by screening the
XX CC library with an anti-GDE peptide antibody, amplifying the inserts with
XX CC the primers AAT18903-4 and probing the fragments with the probe AAT18905.
XX CC This screening resulted in the full length clone designated lambda GDE4-
XX CC 2. The coding region of the clone was subsequently PCR amplified by the
XX CC primers AAT11576-7 and inserted into the eukaryotic expression vector
XX CC pKDCR under control of the SV40 promoter for production of the protein in
XX CC COS-7 cells. The protein is useful in preventing and treating diseases
XX CC characterised by an excess of glucagon or vasoactive intestinal peptide

```
XX SQ Sequence 28 AA;
Query Match 93.7%; Score 134; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
DQ 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 14
AAW65188
ID AAW65188 standard; peptide; 28 AA.
XX
AC AAW65188;
XX
DT 02-OCT-1998 (first entry)
XX
DE Vasoactive intestinal peptide (VIP) analogue.
XX
KW Bradykinin; N-benzylglycine; agonist; receptor study; antagonist;
KW achiral; analgesic; luteinising hormone-releasing hormone; LHRH;
KW vasopressin; vasoactive intestinal peptide; VIP.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Modified-site 28 /note= "C-terminal amide"
FT
XX
PN US5527882-A.
XX
PD 18-JUN-1996.
XX
PF 07-NOV-1994; 94US-00335202.
XX
PR 07-JUL-1989; 89US-00376839.
PR 16-SEP-1992; 92US-00945664.
XX
PA (REGC ) UNIV CALIFORNIA.
PI Young JD, Mitchell AR;
XX
XX WPI; 1996-299898/30.
XX
XX New bradykinin analogues contg. N-benzyl-glycine - useful as bradykinin
XX agonists or antagonists, useful e.g. as analgesics.
XX
XX Disclosure; Col 7-8; 15pp; English.
XX
CC The invention relates to the obtaining of a potent agonist or antagonist
CC peptide by the replacement of selected amino acids with synthetic achiral
CC amino acids. The present sequence represents a vasoactive intestinal
CC peptide (VIP) analogue, where at least one of Phe6 and Met17 is intended
CC to be replaced by N-benzylglycine, N-cyclohexylmethylglycine or the ring
CC substituted derivatives thereof
XX
SQ Sequence 28 AA;
Query Match 93.7%; Score 134; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
DQ 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 15
AAW06120
ID AAW06120 standard; peptide; 28 AA.
```

```
XX AC AAW06120;
XX
XX 16-JUL-1997 (first entry)
XX
XX Human VIP peptide.
XX
XX Vasoactive intestinal peptide; VIP; immunise; egg-laying bird; turkey;
XX food-producing animal; egg production; feed utilisation.
XX
XX Homo sapiens.
XX
XX WO9634958-A1.
XX
XX 07-NOV-1996.
XX
XX 03-MAY-1996; 96WO-CA000280.
XX
XX 03-MAY-1995; 95US-00433108.
XX
XX (BIOS-) BIOSTAR INC.
XX
XX Cox GJ, Weeks-Levy C;
XX
XX WPI; 1996-506160/50.
XX
XX New recombinant vasoactive intestinal peptide(s) - used to immunise birds
XX for increasing egg prodn. or animals for increasing food utilisation.
XX
XX Disclosure; Fig 1; 47pp; English.
XX
CC The sequences given in AAW06110-23 represent vasoactive intestinal peptides
CC (VIP's) from various species. These peptides, or fragments representing
CC residues 1-10 (peptide V1), 7-16 (peptide V2), 13-22 (peptide V3) and 19-
CC 28 (peptide V4) may be used for immunising egg-laying birds, pref.
CC turkeys, or food-producing animals against VIP. The immunisation is
CC useful for increasing egg prodn. in bird species and for increasing
CC efficiency of feed utilisation and rate of gain in food producing animals
XX
XX Sequence 28 AA;
Query Match 93.7%; Score 134; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
DQ 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:08:19
Job time : 77.875 secs
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:08 ; Search time 21.875 Seconds
(without alignments)
105.825 Million cell updates/sec

Title: US-10-626-719-2

Perfect score: 143
Sequence: 1 HSDAVFTFNYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents AA.*
1: /cgn2_6/ptodata/1/iaa/5 COMB.pep.*
2: /cgn2_6/ptodata/1/iaa/6 COMB.pep.*
3: /cgn2_6/ptodata/1/iaa/H COMB.pep.*
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6: /cgn2_6/ptodata/1/iaa/backfiles1.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	143	100.0	28	US-09-528-200-2	Sequence 2, Appli
2	138	96.5	28	US-09-528-200-6	Sequence 6, Appli
3	134	93.7	28	US-07-690-300B-1	Sequence 1, Appli
4	134	93.7	28	US-07-676-987A-1	Sequence 1, Appli
5	134	93.7	28	US-07-868-906-1	Sequence 1, Appli
6	134	93.7	28	US-08-201-092-1	Sequence 1, Appli
7	134	93.7	28	US-07-924-054-11	Sequence 11, Appli
8	134	93.7	28	US-08-243-082-1	Sequence 1, Appli
9	134	93.7	28	US-08-361-443-1	Sequence 1, Appli
10	134	93.7	28	US-08-288-681A-1	Sequence 1, Appli
11	134	93.7	28	US-07-776-272-26	Sequence 26, Appli
12	134	93.7	28	US-08-308-729-1	Sequence 1, Appli
13	134	93.7	28	US-08-062-472B-40	Sequence 40, Appli
14	134	93.7	28	US-08-171-701A-1	Sequence 1, Appli
15	134	93.7	28	US-08-741-678-1	Sequence 1, Appli
16	134	93.7	28	US-08-519-180-2	Sequence 2, Appli
17	134	93.7	28	US-08-414-424-1	Sequence 1, Appli
18	134	93.7	28	US-08-413-708B-1	Sequence 1, Appli
19	134	93.7	28	US-08-818-253-37	Sequence 37, Appli
20	134	93.7	28	US-08-897-624-1	Sequence 1, Appli
21	134	93.7	28	US-08-930-845-1	Sequence 1, Appli
22	134	93.7	28	US-08-952-568-3	Sequence 3, Appli
23	134	93.7	28	US-08-952-568-4	Sequence 4, Appli
24	134	93.7	28	US-08-952-568-5	Sequence 5, Appli
25	134	93.7	28	US-08-952-568-6	Sequence 6, Appli
26	134	93.7	28	US-08-952-568-10	Sequence 10, Appli
27	134	93.7	28	US-08-952-568-11	Sequence 11, Appli

28	134	93.7	28	2	US-08-952-568-12	Sequence 12, Appli
29	134	93.7	28	2	US-08-952-568-13	Sequence 13, Appli
30	134	93.7	28	2	US-09-192-048-21	Sequence 21, Appli
31	134	93.7	28	2	US-08-893-749-2	Sequence 2, Appli
32	134	93.7	28	2	US-08-818-252-37	Sequence 37, Appli
33	134	93.7	28	2	US-09-260-846-16	Sequence 16, Appli
34	134	93.7	28	2	US-08-842-322-31	Sequence 31, Appli
35	134	93.7	28	2	US-09-333-842-1	Sequence 1, Appli
36	134	93.7	28	2	US-09-446-352B-1	Sequence 1, Appli
37	134	93.7	28	2	US-09-316-919-53	Sequence 53, Appli
38	134	93.7	28	2	US-09-630-335-1	Sequence 1, Appli
39	134	93.7	28	2	US-09-629-632A-1	Sequence 1, Appli
40	134	93.7	28	2	US-09-528-200-3	Sequence 3, Appli
41	134	93.7	28	2	US-09-528-200-4	Sequence 4, Appli
42	134	93.7	28	2	US-09-528-200-5	Sequence 5, Appli
43	134	93.7	28	2	US-09-528-200-196	Sequence 196, Appli
44	134	93.7	28	2	US-09-316-920A-53	Sequence 53, Appli
45	134	93.7	28	2	US-09-646-046-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1
US-09-528-200-2
; Sequence 2, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARSTEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-2

Query Match 100.0%; Score 143; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 2e-13;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 HSDAVFTFNYTLRKQMAVKYLSILN 28

RESULT 2
US-09-528-200-6
; Sequence 6, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARSTEN

```

; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 6
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-6

Query Match          96.5%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 9.9e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-07-690-300B-1
; Sequence 1, Application US/07690300B
; Patent No. 5234907
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/690,300B
; FILING DATE: 19910424
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/374,503
; FILING DATE: 30-JUN-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8480
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO

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; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa
US-07-690-300B-1

Query Match          93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 4
US-07-676-987A-1
; Sequence 1, Application US/07676987A
; Patent No. 5273963
; GENERAL INFORMATION:
; APPLICANT: TERRY W. MOODY
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
; TITLE OF INVENTION: CELL AND NONSMALL CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROTHWELL, FIGG, ERNST & KURZ
; STREET: 555 THIRTEENTH ST. N.W.
; CITY: WASHINGTON
; STATE: D. C.
; COUNTRY: U.S.
; ZIP: 20004
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/676,987A
; FILING DATE: 19910329
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: REPPER, GEORGE R.
; REGISTRATION NUMBER: 31,414
; REFERENCE/DOCKET NUMBER: 1783-101
; TELEPHONE: (202) 783-6040
; TELEFAX: (202) 783-6031
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; MOLECULE TYPE: peptide
US-07-676-987A-1

Query Match          93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 5
US-07-868-906-1
; Sequence 1, Application US/07868906
; Patent No. 5376637
; GENERAL INFORMATION:
; APPLICANT: Sawai, Kiichi
; APPLICANT: Kuroono, Masayasu
; APPLICANT: Mitani, Takahiko
; APPLICANT: Sato, Makoto
; APPLICANT: Takahashi, Haruo
; APPLICANT: Ohwaki, Hiroyuki

```

;/ TITLE OF INVENTION: PHARMACEUTICAL PREPARATION CONTAINING
;/ TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE OR ITS ANALOGUE
;/ NUMBER OF SEQUENCES: 3
;/ CORRESPONDENCE ADDRESS:
;/ ADDRESSEE: Nikaido, Marmelstein, Murray & Oram
;/ STREET: 1725 K St. N.W. Suite 1000
;/ CITY: Washington
;/ STATE: D.C.
;/ COUNTRY: USA
;/ ZIP: 20006
;/ COMPUTER READABLE FORM:
;/ MEDIUM TYPE: Floppy disk
;/ COMPUTER: IBM PC compatible
;/ OPERATING SYSTEM: PC-DOS/MS-DOS
;/ SOFTWARE: Patent In Release #1.0, Version #1.25
;/ CURRENT APPLICATION DATA:
;/ APPLICATION NUMBER: US/07/868,906
;/ FILING DATE: 19920416
;/ CLASSIFICATION: 424
;/ PRIOR APPLICATION DATA:
;/ APPLICATION NUMBER: JP 3-90671
;/ FILING DATE: 22-APR-1991
;/ ATTORNEY/AGENT INFORMATION:
;/ NAME: Oram Jr., George E.
;/ REGISTRATION NUMBER: 27,931
;/ REFERENCE/DOCKET NUMBER: 920238N
;/ TELEPHONE: (202) 659-2930
;/ TELEFAX: (202) 887-0357
;/ TELEX: 440142
;/ INFORMATION FOR SEQ ID NO: 1:
;/ SEQUENCE CHARACTERISTICS:
;/ LENGTH: 28 amino acids
;/ TYPE: AMINO ACID
;/ TOPOLOGY: linear
;/ MOLECULE TYPE: peptide
;/ US-07-868-906-1

Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 6
US-08-201-092-1
;/ Sequence 1, Application US/08201092
;/ Patent No. 5428015
;/ GENERAL INFORMATION:
;/ APPLICANT: KURONO, Masayasu
;/ APPLICANT: MITANI, Takahiko
;/ APPLICANT: TAKAHASHI, Haruo
;/ APPLICANT: SAWAI, Kiichi
;/ TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE
;/ NUMBER OF SEQUENCES: 4
;/ CORRESPONDENCE ADDRESS:
;/ ADDRESSEE: Armstrong, Nikaido, Marmelstein, Kubovcik, &
;/ ADDRESSEE: Murray
;/ STREET: 1725 K St. N.W. Suite 1000
;/ CITY: Washington
;/ STATE: D.C.
;/ COUNTRY: U. S. A.
;/ ZIP: 20006
;/ COMPUTER READABLE FORM:
;/ MEDIUM TYPE: Floppy disk
;/ COMPUTER: IBM PC compatible
;/ OPERATING SYSTEM: PC-DOS/MS-DOS
;/ SOFTWARE: Patent In Release #1.0, Version #1.25
;/ CURRENT APPLICATION DATA:

;/ APPLICATION NUMBER: US/08/201.092
;/ FILING DATE: 24-FEB-1994
;/ CLASSIFICATION:
;/ PRIOR APPLICATION DATA:
;/ APPLICATION NUMBER: JP 2-165739
;/ FILING DATE: 26-JUN-1990
;/ PRIOR APPLICATION DATA:
;/ APPLICATION NUMBER: JP 2-408425
;/ FILING DATE: 27-DEC-1990
;/ PRIOR APPLICATION DATA:
;/ APPLICATION NUMBER: US 07/704,143
;/ FILING DATE: 22-MAY-1991
;/ ATTORNEY/AGENT INFORMATION:
;/ NAME: Oram Jr., George E.
;/ REGISTRATION NUMBER: 27,931
;/ REFERENCE/DOCKET NUMBER: N910809
;/ TELECOMMUNICATION INFORMATION:
;/ TELEPHONE: (202)-659-2930
;/ TELEFAX: (202)-887-0357
;/ TELEX: 440142
;/ INFORMATION FOR SEQ ID NO: 1:
;/ SEQUENCE CHARACTERISTICS:
;/ LENGTH: 28 amino acids
;/ TYPE: amino acid
;/ TOPOLOGY: linear
;/ MOLECULE TYPE: peptide
;/ FRAGMENT TYPE: C-terminal
;/ ORIGINAL SOURCE:
;/ ORGANISM: Homo sapiens
;/ TISSUE TYPE: Small intestine, proximal
;/ US-08-201-092-1

Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 7
US-07-924-054-11
;/ Sequence 11, Application US/07924054
;/ Patent No. 5486472
;/ GENERAL INFORMATION:
;/ APPLICANT: SUZUKI, No. 5486472uhiro
;/ APPLICANT: KITADA, Chieko
;/ APPLICANT: TSUDA, Masao
;/ TITLE OF INVENTION: ANTIBODY TO PACAP AND USE THEREOF
;/ NUMBER OF SEQUENCES: 11
;/ CORRESPONDENCE ADDRESS:
;/ ADDRESSEE: DAVID G. CONLIN; DIKE, BRONSTEIN, ROBERTS &
;/ ADDRESSEE: CUSHMAN
;/ STREET: 130 Water Street
;/ CITY: Boston
;/ STATE: Massachusetts
;/ COUNTRY: US
;/ ZIP: 02109
;/ COMPUTER READABLE FORM:
;/ MEDIUM TYPE: Floppy disk
;/ COMPUTER: IBM PC compatible
;/ OPERATING SYSTEM: PC-DOS/MS-DOS
;/ SOFTWARE: Patent In Release #1.0, Version #1.25
;/ CURRENT APPLICATION DATA:
;/ APPLICATION NUMBER: US/07/924,054
;/ FILING DATE: 19920903
;/ CLASSIFICATION: 435
;/ ATTORNEY/AGENT INFORMATION:
;/ NAME: RESNICK, David S.
;/ REGISTRATION NUMBER: 34235
;/ REFERENCE/DOCKET NUMBER: 40805
;/ TELECOMMUNICATION INFORMATION:

TELEPHONE: (617)523-3400
TELEFAX: (617)523-6440
TELEX: 200291 STR UR
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: protein
US-07-924-054-11

Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28

RESULT 8
US-08-243-082-1
Sequence 1, Application US/08243082
Patent No. 5506120
GENERAL INFORMATION:
APPLICANT: YAMAMOTO, Hiroaki
APPLICANT: YAMASHITA, Kunihiko
TITLE OF INVENTION: METHOD OF PRODUCING PEPTIDES OR
TITLE OF INVENTION: PROTEINS
NUMBER OF SEQUENCES: 26
CORRESPONDENCE ADDRESS:
ADDRESSEE: Spencer, Frank & Schneider
STREET: 1111 Nineteenth Street, N.W.
CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20036
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/243,082
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/853,754
FILING DATE: 05-JUN-1992
ATTORNEY/AGENT INFORMATION:
NAME: Schneller, John W.
REGISTRATION NUMBER: 26,031
REFERENCE/DOCKET NUMBER: KUWAT 0010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 828-8000
TELEFAX: (202) 828-8038
TELEX: SPENCER 64267
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
US-08-243-082-1

Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28

Db 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28
RESULT 9
US-08-361-443-1
Sequence 1, Application US/08361443
Patent No. 5521157
GENERAL INFORMATION:
APPLICANT: No. 5521157a, Hitoshi
APPLICANT: Yamakawa, Hidehumi
APPLICANT: Yoshida, Shigeaki
APPLICANT: Ishida, Tautomu
APPLICANT: Tomiya, No. 5521157oru
TITLE OF INVENTION: MODIFIED POLYPEPTIDE COMPOUND AND USE OF
TITLE OF INVENTION: THE SAME
NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
ADDRESSEE: SUGHRUE, MION, ZINN, MACPEAK & SEAS
STREET: 2100 Pennsylvania Ave.
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/361,443
FILING DATE:
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP Hei. 5-319815
FILING DATE: 20-DEC-1993
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-361-443-1

Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28

RESULT 10
US-08-288-681A-1
Sequence 1, Application US/08288681A
Patent No. 5595897
GENERAL INFORMATION:
APPLICANT: MIDOUX, PATRICK; ERBACHER,
APPLICANT: PATRICK; ROCHE-DEGREMONT, ANNIE-CLAUDE;
APPLICANT: MONSIGNY, MICHEL
TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC
TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
TITLE OF INVENTION: PREPARATION AND THEIR USAGE FOR TRANSECTION
TITLE OF INVENTION: OF CELLS
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: BIERMAN & MUSERLIAN
STREET: 600 THIRD AVENUE
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA

Query Match	93.7%;	Score 134;	DB 1;	Length 28;
Best Local Similarity	96.4%;	Pred. No. 3.6e-12;		

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; OPERATING SYSTEM: MS-DOS
; SOFTWARE: Wordperfect , Version 5.1 Plus
; CURRENT APPLICATION DATA: US/08/171,701A
; APPLICATION NUMBER: US/08/171,701A
; FILING DATE: December 22, 1993
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 Amino Acids
; TYPE: Amino Acid
; TOPOLOGY: linear
; MOLECULE TYPE: Peptide
; FRAGMENT TYPE: N-terminal
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 1
; OTHER INFORMATION:
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 28
; OTHER INFORMATION:
;
; US-08-171-701A-1
;
Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels

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Db 1 HSDAVFTFNYYTLRLKQMAVKKYLNSILN 28
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RESULT 15
US-08-741-678-1
; Sequence 1, Application US/08741678
; Patent No. 5733762
; GENERAL INFORMATION:
; APPLICANT: MIDDOUX, PATRICK; ERBACHER,
; APPLICANT: PATRICK; ROCHE-DEGREMONT,
; APPLICANT: ANNIE-CLAUDE; MONSIGNY, MICHEL
; TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC
; TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
; TITLE OF INVENTION: PREPARATION AND THEIR USE FOR THE
; TITLE OF INVENTION: TRANSFECTION OF CELLS
; NUMBER OF SEQUENCES: 8
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BIERMAN & MUSERLIAN
; STREET: 600 THIRD AVENUE
; CITY: NEW YORK
; STATE: NEW YORK
; COUNTRY: USA
; ZIP: 10016
; COMPUTER READABLE FORM:
; MEDIUM TYPE: FLOPPY DISK
; COMPUTER: IBM PC COMPATIBLE
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: ASCII
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/741,678
; FILING DATE: 31-OCT-1996
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: MUSERLIAN, CHARLES A
; REGISTRATION NUMBER: 19,683
; REFERENCE/DOCKET NUMBER: 410.005-1-1
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 661-8000
; TELEFAX: (212) 661-8002
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28
; TYPE: Amino Acid
; STRANDEDNESS: Unknown
; TOPOLOGY: Unknown

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Search completed: January 25, 2006, 15:23:43
Job time : 21.875 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:48 ; Search time 53.625 Seconds
(without alignments)
218.167 Million cell updates/sec

Title: US-10-626-719-2
Perfect score: 143
Sequence: 1 HSDAVFTNTRLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA Main:
1: /cgn2_6/prodata1/pubpaa/US07_PUBCOMB.pep.*
2: /cgn2_6/prodata1/pubpaa/US08_PUBCOMB.pep.*
3: /cgn2_6/prodata1/pubpaa/US09_PUBCOMB.pep.*
4: /cgn2_6/prodata1/pubpaa/US10A_PUBCOMB.pep.*
5: /cgn2_6/prodata1/pubpaa/US10B_PUBCOMB.pep.*
6: /cgn2_6/prodata1/pubpaa/US11_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	135	94.4	28	US-09-929-818-187	Sequence 187, App
2	135	94.4	28	US-09-929-818-186	Sequence 188, App
3	134	93.7	28	US-09-929-818-1	Sequence 1, Appl
4	134	93.7	28	US-09-929-818-189	Sequence 189, App
5	134	93.7	28	US-09-929-818-190	Sequence 190, App
6	134	93.7	28	US-09-999-745-53	Sequence 53, Appl
7	134	93.7	28	US-09-554-000-37	Sequence 37, Appl
8	134	93.7	28	US-10-090-109A-1	Sequence 1, Appl
9	134	93.7	28	US-10-044-722-8	Sequence 8, Appl
10	134	93.7	28	US-10-004-530A-17	Sequence 17, Appl
11	134	93.7	28	US-10-114-716A-3	Sequence 3, Appl
12	134	93.7	28	US-10-211-994-1	Sequence 1, Appl
13	134	93.7	28	US-10-197-954-145	Sequence 145, App
14	134	93.7	28	US-10-100-256B-1	Sequence 1, Appl
15	134	93.7	28	US-10-254-569A-1	Sequence 1, Appl
16	134	93.7	28	US-10-201-288-31	Sequence 31, Appl
17	134	93.7	28	US-10-343-654-22	Sequence 22, Appl
18	134	93.7	28	US-10-416-822-1	Sequence 1, Appl
19	134	93.7	28	US-10-467-059-14	Sequence 14, Appl
20	134	93.7	28	US-10-494-634-7	Sequence 7, Appl
21	134	93.7	28	US-10-718-071-36	Sequence 36, Appl
22	134	93.7	28	US-10-788-563-17	Sequence 17, Appl
23	134	93.7	28	US-10-760-085-145	Sequence 145, App
24	134	93.7	28	US-10-892-981A-1	Sequence 1, Appl
25	134	93.7	28	US-10-769-803-2	Sequence 2, Appl
26	134	93.7	28	US-10-919-325-32	Sequence 32, Appl
27	134	93.7	28	US-10-898-143-1	Sequence 1, Appl

28	134	93.7	28	5	US-10-930-548-3	Sequence 3, Appl
29	134	93.7	28	5	US-10-770-712-56	Sequence 56, Appl
30	134	93.7	28	5	US-10-799-897A-1	Sequence 1, Appl
31	134	93.7	28	6	US-11-066-697-454	Sequence 454, App
32	134	93.7	28	6	US-11-066-697-455	Sequence 455, App
33	134	93.7	29	4	US-10-131-543-11	Sequence 11, Appl
34	134	93.7	29	4	US-10-131-546-11	Sequence 11, Appl
35	134	93.7	29	4	US-10-131-546-11	Sequence 11, Appl
36	134	93.7	29	4	US-10-415-024-11	Sequence 11, Appl
37	134	93.7	29	6	US-11-088-596-11	Sequence 11, Appl
38	134	93.7	29	6	US-11-086-966-11	Sequence 11, Appl
39	134	93.7	30	3	US-09-929-818-203	Sequence 203, App
40	134	93.7	30	3	US-09-929-818-204	Sequence 204, App
41	134	93.7	30	3	US-09-929-818-205	Sequence 205, App
42	134	93.7	31	4	US-10-131-543-9	Sequence 9, Appl
43	134	93.7	31	4	US-10-131-543-10	Sequence 10, Appl
44	134	93.7	31	4	US-10-131-543-16	Sequence 16, Appl
45	134	93.7	31	4	US-10-131-546-9	Sequence 9, Appl

ALIGNMENTS

RESULT 1
US-09-929-818-187
; Sequence 187, Application US/09929818
; Patent No. US2002009003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 187
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-187

Query Match 94.4%; Score 135; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNTRLRKQMAVKYLSILN 28
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Db 1 HSDAVFTNTRLRKQMAVKYLSILN 28

RESULT 2
US-09-929-818-188
; Sequence 188, Application US/09929818
; Patent No. US2002009003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE

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; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 188
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
; OTHER INFORMATION: analog
US-09-929-818-188

Query Match 94.4%; Score 135; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTSNTRLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | | | | | | | | | |

RESULT 3
US-09-929-818-1
; Sequence 1, Application US/09929818
; Patent No. US2002009003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-929-818-1

Query Match 93.7%; Score 134; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | | | | | | | | | |

RESULT 4
US-09-929-818-189
; Sequence 189, Application US/09929818
; Patent No. US2002009003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 189
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
; OTHER INFORMATION: analog
US-09-929-818-189

Query Match 93.7%; Score 134; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTNMYTRLRKQMAVKKYLNSILN 28
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RESULT 5
US-09-929-818-190
; Sequence 190, Application US/09929818
; Patent No. US2002009003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 190
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
; OTHER INFORMATION: analog
US-09-929-818-190

Query Match 93.7%; Score 134; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTNMYTRLRKQMAVKKYLNSILN 28
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QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28

RESULT 6
US-09-999-745-53
; Sequence 53, Application US/09999745
; Patent No. US20020157120A1
; GENERAL INFORMATION:
; APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Baird, Geoffrey
; TITLE OF INVENTION: CIRCULARLY PERMUTED FLUORESCENT PROTEIN INDICATORS
; FILE REFERENCE: REGEN1470-1
; CURRENT APPLICATION NUMBER: US/09/999,745
; CURRENT FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: 09/316,920
; PRIOR FILING DATE: 1999-08-21
; NUMBER OF SEQ ID NOS: 67
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 53
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-999-745-53

Query Match 93.7%; Score 134; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 7
US-09-554-000-37
; Sequence 37, Application US/09554000
; Patent No. US20020165364A1
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Miyawaki, Atsushi
; TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR
; FILE REFERENCE: 07257/042001
; CURRENT APPLICATION NUMBER: US/09/554,000
; CURRENT FILING DATE: 2000-04-20
; PRIOR APPLICATION NUMBER: 08/818,252
; PRIOR FILING DATE: 1997-03-14
; NUMBER OF SEQ ID NOS: 56
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 37
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-554-000-37

Query Match 93.7%; Score 134; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 8
US-10-090-109A-1
; Sequence 1, Application US/10090109A
; Publication No. US20020151458A1
; GENERAL INFORMATION:
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; APPLICANT: Perez Gomariz, et al
; TITLE OF INVENTION: Method For Treating and Preventing Septic Shock With
; FILE REFERENCE: VPAC1R, VPAC2R, and PAC1R Agonists
; CURRENT APPLICATION NUMBER: US/10/090,109A
; CURRENT FILING DATE: 2002-06-17
; PRIOR APPLICATION NUMBER: US 09/446,352
; PRIOR FILING DATE: 2000-12-17
; NUMBER OF SEQ ID NOS: 3
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: unknown
; FEATURE:
; OTHER INFORMATION: Isolated from small intestines and brains of pigs
US-10-090-109A-1

Query Match 93.7%; Score 134; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 9
US-10-044-722-8
; Sequence 8, Application US/10044722
; Publication No. US20020182729A1
; GENERAL INFORMATION:
; APPLICANT: DICICCO-BLOOM, Emanuel
; APPLICANT: NICOT, Arnaud
; APPLICANT: LU, Nairu
; APPLICANT: SUH, Junghyup
; TITLE OF INVENTION: Pituitary adenylate cyclase-activating polypeptide (PACAP) is an
; FILE REFERENCE: 270/175
; CURRENT APPLICATION NUMBER: US/10/044,722
; CURRENT FILING DATE: 2002-01-11
; NUMBER OF SEQ ID NOS: 8
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-044-722-8

Query Match 93.7%; Score 134; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 10
US-10-004-530A-17
; Sequence 17, Application US/10004530A
; Publication No. US20030050436A1
; GENERAL INFORMATION:
; APPLICANT: Coy, David H.
; APPLICANT: Moreau, Jacques-Pierre
; APPLICANT: Kim, Sun H.
; TITLE OF INVENTION: OCTAPEPTIDE BOMBESIN ANALOGS
; FILE REFERENCE: 00537-00900K
; CURRENT APPLICATION NUMBER: US/10/004,530A
; CURRENT FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 09/260,846
; PRIOR FILING DATE: 1999-03-02
; PRIOR APPLICATION NUMBER: 08/337,127
; PRIOR FILING DATE: 1994-11-10
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; PRIOR APPLICATION NUMBER: 07/779,039
 ; PRIOR FILING DATE: 1991-10-18
 ; PRIOR APPLICATION NUMBER: 07/502,438
 ; PRIOR FILING DATE: 1990-03-30
 ; PRIOR APPLICATION NUMBER: 07/397,169
 ; PRIOR FILING DATE: 1989-08-21
 ; PRIOR APPLICATION NUMBER: 07/376,555
 ; PRIOR FILING DATE: 1989-07-07
 ; PRIOR APPLICATION NUMBER: 07/317,941
 ; PRIOR FILING DATE: 1989-03-02
 ; PRIOR APPLICATION NUMBER: 07/282,328
 ; PRIOR FILING DATE: 1988-12-09
 ; PRIOR APPLICATION NUMBER: 07/257,998
 ; PRIOR FILING DATE: 1988-10-14
 ; PRIOR APPLICATION NUMBER: 07/248,771
 ; PRIOR FILING DATE: 1988-09-23
 ; Prior Application data removed - See File Wrapper or PALM.
 ; NUMBER OF SEQ ID NOS: 26
 ; SOFTWARE: FastSeq for Windows Version 4.0
 ; SEQ ID NO 17
 ; LENGTH: 28
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-10-004-530A-17

Query Match 93.7%; Score 134; DB 4; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.1e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 11
 US-10-114-716A-3
 ; Sequence 3, Application US/10114716A
 ; Publication No. US20030078203A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Sudhir Paul
 ; APPLICANT: Yasuhiro Nishiyama
 ; TITLE OF INVENTION: Covalently Reactive Transition State
 ; TITLE OF INVENTION: Analogs and Methods of Use Thereof
 ; FILE REFERENCE: UTH001HB
 ; CURRENT APPLICATION NUMBER: US/10/114,716A
 ; CURRENT FILING DATE: 2002-04-01
 ; PRIOR APPLICATION NUMBER: 09/862,849
 ; PRIOR FILING DATE: 2001-05-22
 ; PRIOR APPLICATION NUMBER: 09/046,373
 ; PRIOR FILING DATE: 1998-03-23
 ; PRIOR APPLICATION NUMBER: 60/280,624
 ; PRIOR FILING DATE: 2001-03-31
 ; NUMBER OF SEQ ID NOS: 57
 ; SOFTWARE: FastSeq for Windows Version 3.0
 ; SEQ ID NO 3
 ; LENGTH: 28
 ; TYPE: PRT
 ; ORGANISM: Vasoactive intestinal peptide
 US-10-114-716A-3

Query Match 93.7%; Score 134; DB 4; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.1e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 12
 US-10-211-994-1
 ; Sequence 1, Application US/10211994
 ; Publication No. US20030082201A1

; GENERAL INFORMATION:
 ; APPLICANT: Rao, M.R.S.
 ; APPLICANT: Sengupta, Paromita
 ; APPLICANT: Prasad, Sudhanand
 ; APPLICANT: Burman, Anand C.
 ; APPLICANT: Mukherjee, Rama
 ; APPLICANT: Thomas, Becky
 ; TITLE OF INVENTION: MULTIVALENT SYNTHETIC VACCINE FOR CANCER
 ; FILE REFERENCE: U014152-1
 ; CURRENT APPLICATION NUMBER: US/10/211,994
 ; CURRENT FILING DATE: 2002-08-02
 ; PRIOR APPLICATION NUMBER: 60/309,975
 ; PRIOR FILING DATE: 2001-08-03
 ; NUMBER OF SEQ ID NOS: 29
 ; SOFTWARE: PatentIn version 3.1
 ; SEQ ID NO 1
 ; LENGTH: 28
 ; TYPE: PRT
 ; ORGANISM: Sus barbatus
 US-10-211-994-1

Query Match 93.7%; Score 134; DB 4; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.1e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 13
 US-10-197-954-145
 ; Sequence 145, Application US/10197954
 ; Publication No. US20030119021A1
 ; GENERAL INFORMATION:
 ; APPLICANT: K"ster, Hubert
 ; APPLICANT: Siddigi, Suhaib
 ; APPLICANT: Little, Daniel
 ; TITLE OF INVENTION: Capture Compounds, Collections Thereof
 ; TITLE OF INVENTION: And Methods For Analyzing The Proteome And Complex
 ; TITLE OF INVENTION: Compositions
 ; FILE REFERENCE: 24743-2305
 ; CURRENT APPLICATION NUMBER: US/10/197,954
 ; CURRENT FILING DATE: 2002-07-16
 ; PRIOR APPLICATION NUMBER: 60/306,019
 ; PRIOR FILING DATE: 2001-07-16
 ; PRIOR APPLICATION NUMBER: 60/314,123
 ; PRIOR FILING DATE: 2001-08-21
 ; PRIOR APPLICATION NUMBER: 60/363,433
 ; PRIOR FILING DATE: 2002-03-11
 ; NUMBER OF SEQ ID NOS: 149
 ; SOFTWARE: FastSeq for Windows Version 4.0
 ; SEQ ID NO 145
 ; LENGTH: 28
 ; TYPE: PRT
 ; ORGANISM: Homo Sapien
 US-10-197-954-145

Query Match 93.7%; Score 134; DB 4; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.1e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 14
 US-10-100-256B-1
 ; Sequence 1, Application US/10100256B
 ; Publication No. US20030152511A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Thakur, Madhukar

Search completed: January 25, 2006, 15:31:03
Job time : 53.625 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2006 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2006, 15:08:34 ; Search time 3.5 Seconds
(without alignments)
86.633 Million cell updates/sec

Title: US-10-626-719-2

Perfect score: 143

Sequence: 1 HSDAVFTNYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 75621 seqs, 10829074 residues

Total number of hits satisfying chosen parameters: 75621

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications_AA_New.*

- 1: /cgn2_6/prodata/2/pubpaa/US08_NEW_PUB.pep.*
- 2: /cgn2_6/prodata/2/pubpaa/US06_NEW_PUB.pep.*
- 3: /cgn2_6/prodata/2/pubpaa/US07_NEW_PUB.pep.*
- 4: /cgn2_6/prodata/2/pubpaa/PCT_NEW_PUB.pep.*
- 5: /cgn2_6/prodata/2/pubpaa/US05_NEW_PUB.pep.*
- 6: /cgn2_6/prodata/2/pubpaa/US10_NEW_PUB.pep.*
- 7: /cgn2_6/prodata/2/pubpaa/US11_NEW_PUB.pep.*
- 8: /cgn2_6/prodata/2/pubpaa/US60_NEW_PUB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	134	93.7	28	7	US-11-175-690-352
2	134	93.7	28	7	US-11-175-690-353
3	134	93.7	637	7	US-11-175-690-265
4	134	93.7	637	7	US-11-175-690-266
5	98	68.5	636	7	US-11-175-690-240
6	97	67.8	27	7	US-11-175-690-326
7	97	67.8	27	7	US-11-175-690-327
8	97	67.8	38	7	US-11-175-690-328
9	97	67.8	38	7	US-11-175-690-329
10	97	67.8	636	7	US-11-175-690-239
11	97	67.8	647	7	US-11-175-690-241
12	97	67.8	647	7	US-11-175-690-242
13	73	51.0	636	7	US-11-175-690-278
14	72	50.3	27	7	US-11-175-690-365
15	72	50.3	27	7	US-11-175-690-365
16	72	50.3	636	7	US-11-175-690-277
17	61	42.7	30	7	US-11-112-277-30
18	57	39.9	30	7	US-11-112-277-2
19	55	38.5	30	7	US-11-112-277-29
20	55	38.5	49	6	US-10-997-081A-26
21	55	38.5	49	6	US-10-997-081A-27
22	55	38.5	49	6	US-10-997-081A-28
23	55	38.5	49	6	US-10-997-081A-29
24	55	38.5	49	6	US-10-997-081A-30
25	55	38.5	49	6	US-10-997-081A-31

26	55	38.5	49	6	US-10-997-081A-32	Sequence 32, Appl
27	55	38.5	49	6	US-10-997-081A-35	Sequence 35, Appl
28	55	38.5	95	6	US-10-997-081A-25	Sequence 25, Appl
29	55	38.5	97	6	US-10-997-081A-11	Sequence 11, Appl
30	55	38.5	97	6	US-10-997-081A-18	Sequence 18, Appl
31	55	38.5	97	6	US-10-997-081A-19	Sequence 19, Appl
32	55	38.5	97	6	US-10-997-081A-20	Sequence 20, Appl
33	55	38.5	97	6	US-10-997-081A-21	Sequence 21, Appl
34	55	38.5	97	6	US-10-997-081A-22	Sequence 22, Appl
35	55	38.5	97	6	US-10-997-081A-23	Sequence 23, Appl
36	55	38.5	97	6	US-10-997-081A-40	Sequence 40, Appl
37	55	38.5	97	6	US-10-997-081A-41	Sequence 41, Appl
38	55	38.5	105	6	US-10-997-081A-10	Sequence 10, Appl
39	54	37.8	30	7	US-11-112-277-31	Sequence 31, Appl
40	49	34.3	636	7	US-11-175-690-268	Sequence 268, App
41	48	33.6	27	7	US-11-175-690-354	Sequence 354, App
42	48	33.6	27	7	US-11-175-690-355	Sequence 355, App
43	48	33.6	636	7	US-11-175-690-267	Sequence 267, App
44	46	32.2	556	7	US-11-124-368A-303	Sequence 303, App
45	46	32.2	766	6	US-10-793-626-2578	Sequence 2578, Ap

ALIGNMENTS

RESULT 1
US-11-175-690-352
; Sequence 352, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 352
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-352

Query Match 93.7%; Score 134; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.3e-15;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNYTLRKQMAVKYLSILN 28
Db 1 HSDAVFTNYTLRKQMAVKYLSILN 28

RESULT 2
US-11-175-690-353
; Sequence 353, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:

Best Local Similarity 96.4%; Pred. No. 3e-13; Indels 1; Mismatches 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
Db 610 HSDAVFTDNYTRLRKQMAVKKYLNSILN 637

RESULT 4
US-11-175-690-266
; Sequence 266, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 266
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-266

Query Match 93.7%; Score 134; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 3e-13; Indels 1; Mismatches 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
Db 25 HSDAVFTDNYTRLRKQMAVKKYLNSILN 52

RESULT 5
US-11-175-690-240
; Sequence 240, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06

APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 353
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-353

Query Match 93.7%; Score 134; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.3e-15; Indels 1; Mismatches 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-11-175-690-265
; Sequence 265, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match 93.7%; Score 134; DB 7; Length 637;

Query Match	Best Local Similarity	Score	DB	Length	Mismatches	Indels	Gaps
Query Match	Best Local Similarity	68.58%;	Score 98;	DB 7; Length 636;	6; Mismatches	4; Indels	0; Gaps
Matches 18; Conservative	Matches 18; Conservative	66.33%;	Pred. No. 1.1e-07;		6; Mismatches	4; Indels	0; Gaps
QY	1 HSDAVFTFNTRLRKQMAVKKYLNSIL 28						
DB	25 HSDGIFTDSYRKRQMAVKKYLAAVL 52						
RESULT 6							
US-11-175-690-326							
Sequence 326, Application US/11175690							
Publication No. US20060014254A1							
GENERAL INFORMATION:							
APPLICANT: Haseltine et al.							
FILE REFERENCE: PF605							
CURRENT APPLICATION NUMBER: US/11/175,690							
CURRENT FILING DATE: 2005-07-07							
PRIOR APPLICATION NUMBER: PCT/US04/001369							
PRIOR FILING DATE: 2004-01-20							
PRIOR APPLICATION NUMBER: US 60/441,305							
PRIOR FILING DATE: 2003-01-22							
PRIOR APPLICATION NUMBER: US 60/453,201							
PRIOR FILING DATE: 2003-03-11							
PRIOR APPLICATION NUMBER: US 60/476,267							
PRIOR FILING DATE: 2003-06-06							
PRIOR APPLICATION NUMBER: US 60/505,172							
PRIOR FILING DATE: 2003-09-24							
PRIOR APPLICATION NUMBER: US 60/506,746							
PRIOR FILING DATE: 2003-09-30							
NUMBER OF SEQ ID NOS: 568							
SOFTWARE: Patentin Ver. 2.0							
SEQ ID NO 326							
LENGTH: 27							
TYPE: PRT							
ORGANISM: Homo sapiens							
US-11-175-690-326							
Query Match	Best Local Similarity	67.88%;	Score 97;	DB 7; Length 27;	5; Mismatches	4; Indels	0; Gaps
Matches 18; Conservative	Matches 18; Conservative	66.78%;	Pred. No. 4.2e-09;		5; Mismatches	4; Indels	0; Gaps
QY	1 HSDAVFTFNTRLRKQMAVKKYLNSIL 27						
DB	1 HSDGIFTDSYRKRQMAVKKYLAAVL 27						
RESULT 7							
US-11-175-690-327							
Sequence 327, Application US/11175690							
Publication No. US20060014254A1							
GENERAL INFORMATION:							
APPLICANT: Haseltine et al.							
FILE REFERENCE: PF605							
CURRENT APPLICATION NUMBER: US/11/175,690							
CURRENT FILING DATE: 2005-07-07							
PRIOR APPLICATION NUMBER: PCT/US04/001369							
PRIOR FILING DATE: 2004-01-20							
PRIOR APPLICATION NUMBER: US 60/441,305							
PRIOR FILING DATE: 2003-01-22							
PRIOR APPLICATION NUMBER: US 60/453,201							
PRIOR FILING DATE: 2003-03-11							
PRIOR APPLICATION NUMBER: US 60/476,222							
PRIOR FILING DATE: 2003-05-02							
PRIOR APPLICATION NUMBER: US 60/472,816							
PRIOR FILING DATE: 2003-05-23							
PRIOR APPLICATION NUMBER: US 60/476,267							
PRIOR FILING DATE: 2003-06-06							
PRIOR APPLICATION NUMBER: US 60/505,172							
PRIOR FILING DATE: 2003-09-24							
PRIOR APPLICATION NUMBER: US 60/506,746							
PRIOR FILING DATE: 2003-09-30							
NUMBER OF SEQ ID NOS: 568							
SOFTWARE							

[illegible]

Db 25 HADGVFTSDFSKLLGQLS AKKYLESLMD 52

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US-11-175-590-365
; Sequence 365, Application US/11175590
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PP605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/457,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patent Ver. 2.0
; SEQ ID NO 365
; LENGTH: 27

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; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-365

Query Match          50.3%;   Score 72;   DB 7;   Length 27;
Best Local Similarity 44.4%;   Pred. No. 3e-05;
Matches 12;   Conservative 9;   Mismatches 6;   Indels 0;   Gaps 0;

QY      1  HSDAVFTFNYTRLRKQMAVKYKYLNSIL 27
      | : | | | : | | : | | | | : |
      | : | | | : | | : | | | | : |
      | : | | | : | | : | | | | : |

Db      1  HADGVFTSDFSKLLGQLSAKKYLESLM 27

Search completed: January 25, 2006, 15:31:42
Job time : 3.5 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2006 Compugen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2006, 14:55:03 ; Search time 13.25 Seconds
(without alignments)
203.326 Million cell updates/sec

Title: US-10-626-719-2

Perfect score: 143

Sequence: 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

PIR 80.*

1: pir1.*

2: pir2.*

3: pir3.*

4: pir4.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	134	93.7	28	B60071	vasoactive intesti
2	134	93.7	28	A60304	vasoactive intesti
3	134	93.7	55	VRBO	vasoactive intesti
4	134	93.7	55	VRBR	vasoactive intesti
5	134	93.7	55	VRSH	vasoactive intesti
6	134	93.7	58	VRPG	vasoactive intesti
7	134	93.7	145	A60038	vasoactive intesti
8	134	93.7	170	VRHU	vasoactive intesti
9	134	93.7	170	VRRT	vasoactive intesti
10	134	93.7	170	A60037	vasoactive intesti
11	121	84.6	55	VRGP	vasoactive intesti
12	119	83.2	165	VRCH	vasoactive intesti
13	118	82.5	28	A60303	vasoactive intesti
14	111	77.6	28	A38232	vasoactive intesti
15	108	75.5	25	JQ361	vasoactive intesti
16	97	67.8	27	A61071	pituitary adenylat
17	97	67.8	38	A49165	pituitary adenylat
18	97	67.8	173	S34767	neuropeptides prec
19	97	67.8	175	A37786	pituitary adenylat
20	97	67.8	176	I84638	pituitary adenylat
21	97	67.8	176	A34044	pituitary adenylat
22	97	67.8	195	I50456	pituitary adenylat
23	91	63.6	38	A61070	pituitary adenylat
24	79	55.2	35	HWGHD	exendin-1 - Gila m
25	79	55.2	38	HWGHS	exendin-1 - Mexica
26	69	48.3	103	A41410	somatoliberin prec
27	69	48.3	104	A32731	somatoliberin prec
28	61	42.7	27	SECH	secretin - chicken
29	60	42.0	44	RHBOS	somatoliberin - bo

30 55 38.5 44 1 RHPG somatoliberin - pi
31 55 38.5 108 1 RHHS somatoliberin prec
32 54 37.8 206 2 IS1301 proglucagon - chic
33 54 37.8 310 2 B97763 hypothetical prote'
34 53 37.1 11 2 A32428 amine oxidase (cop
35 53 37.1 443 2 C70392 gamma-glutamyl pho
36 52 36.4 194 2 T27608 hypothetical prote
37 52 36.4 194 2 T29172 hypothetical prote
38 52 36.4 276 2 AD1860 two-component resp
39 52 36.4 323 2 E71694 hypothetical prote
40 50 35.0 27 2 A27267 secretin - dog
41 50 35.0 168 2 F90095 hypothetical prote
42 50 35.0 404 2 F64238 hypothetical prote
43 48 33.6 27 1 S07443 secretin - human
44 48 33.6 27 1 SEBO secretin - bovine
45 48 33.6 27 1 SESH secretin - sheep

ALIGNMENTS

RESULT 1

B60071
vasoactive intestinal peptide - rhesus macaque
C:Species: Macaca mulatta (rhesus macaque)
C>Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 20-Mar-1998
C:Accession: B60071
R.Yu, J.; Xin, Y.; Eng, J.; Yalow, R.S.
Regul. Pept. 32, 39-45, 1991
A:Title: Rhesus monkey gastroenteropancreatic hormones: relationship to human sequences.
A:Reference number: A60071; MUID:91164506; PMID:2003150
A:Accession: B60071
A:Status: protein sequence not shown
A:Molecule type: protein
A:Residues: 1-28 <YUA>

A:Cross-references: UNIPARC:UPI000002D1C0
A:Note: the sequence is identical with the human sequence
C:Superfamily: glucagon
C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 93.7%; Score 134; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.7e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28

RESULT 2

A60304
vasoactive intestinal peptide - dog
N:Alternate names: VIP
C:Species: Canis lupus familiaris (dog)
C>Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change 09-Jul-2004
C:Accession: A60304
R.Eng, J.; Pan, Y.C.E.; Raufman, J.P.; Yalow, R.S.
Regul. Pept. Suppl. 3, S14, 1985
A:Title: Purification and sequencing of dog and guinea pig VIP's.
A:Reference number: A60304
A:Accession: A60304
A:Molecule type: protein
A:Residues: 1-28 <ENG>
A:Cross-references: UNIPROT:P04565; UNIPARC:UPI000002D1C0
C:Superfamily: glucagon
C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 93.7%; Score 134; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.7e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||

Db 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

RESULT 3

VRBO

vasoactive intestinal peptide precursor - bovine (fragments)

N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)

C;Species: Bos primigenius taurus (cattle)

C;Date: 26-Apr-1996 #sequence revision 03-May-1996 #text_change 07-May-1999

C;Accession: A61643; A61644; S09689

R;Carliquist, M.; Kaiser, R.; Tatemoto, K.; Joernvall, H.; Mutt, V.

Eur. J. Biochem. 144, 243-247, 1984

A;Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper in

A;Reference number: A61643; MUID:85027215; PMID:6548446

A;Accession: A61643

A;Molecule type: protein

A;Residues: 1-27 <CAR>

A;Cross-references: UNIPARC:UPI0000173515

R;Carliquist, M.; Mutt, V.; Joernvall, H.

FEBS Lett. 108, 457-460, 1979

A;Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).

A;Reference number: A61644; MUID:80092152; PMID:520589

A;Accession: A61644

A;Molecule type: protein

A;Residues: 28-55 <CA2>

A;Cross-references: UNIPARC:UPI000002D1C0

R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, Biochim. Biophys. Acta 1038, 355-359, 1990

A;Title: Purification and amino acid sequence of vasoactive intestinal peptide

A;Reference number: S09688; MUID:90254163; PMID:2340294

A;Contents: annotation; comparison of mammalian PHI sequences

C;Superfamily: glucagon

C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi

F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>

F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>

F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental

F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 93.7%; Score 134; DB 1; Length 55;

Best Local Similarity 96.4%; Pred. No. 5.4e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKKYLNSILN 55

RESULT 4

VRB

vasoactive intestinal peptide precursor - rabbit (fragments)

N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)

C;Species: Oryctolagus cuniculus (domestic rabbit)

C;Date: 03-Feb-1993 #sequence revision 19-Apr-1996 #text_change 20-Mar-1998

C;Accession: B60415; A60415

R;Gossen, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht, Peptides 11, 123-128, 1990

A;Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.

A;Reference number: A60415; MUID:90259845; PMID:2342988

A;Accession: B60415

A;Molecule type: protein

A;Residues: 1-27 <GOS>

A;Cross-references: UNIPARC:UPI00000351DB

A;Accession: A60415

A;Molecule type: protein

A;Residues: 28-55 <G02>

A;Cross-references: UNIPARC:UPI00000351DB

C;Superfamily: Glucagon

C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi

F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>

F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>

F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental

F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 93.7%; Score 134; DB 1; Length 55;

Best Local Similarity 96.4%; Pred. No. 5.4e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKKYLNSILN 55

RESULT 5

VRSH

vasoactive intestinal peptide precursor - sheep (fragments)

N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)

C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)

C;Date: 31-Mar-1993 #sequence revision 19-Apr-1996 #text_change 09-Jul-2004

C;Accession: B60072; A60072; C61063; A43974

R;Bounjoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.

Regul. Pept. 32, 169-179, 1991

A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide 1

A;Reference number: A60072; MUID:91239834; PMID:2034821

A;Accession: B60072

A;Molecule type: protein

A;Residues: 1-27 <BOU>

A;Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515

A;Accession: A60072

A;Molecule type: protein

A;Residues: 28-55 <BO2>

A;Cross-references: UNIPARC:UPI000002D1C0

R;Miyata, A.; Jiang, L.; Stibbs, H.H.; Arimura, A.

Regul. Pept. 38, 145-154, 1992

A;Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreacti

A;Reference number: A61063; MUID:92245116; PMID:1574609

A;Accession: C61063

A;Molecule type: protein

A;Residues: 28-55 <MIY>

A;Cross-references: UNIPARC:UPI000002D1C0

A;Experimental source: hypothalamus, intestine

R;Gafvelin, G.

Peptides 11, 703-706, 1990

A;Title: Isolation and primary structure of VIP from sheep brain.

A;Reference number: A43974; MUID:91045331; PMID:2235680

A;Accession: A43974

A;Molecule type: protein

A;Residues: 28-55 <GAF>

A;Cross-references: UNIPARC:UPI000002D1C0

A;Experimental source: brain

C;Superfamily: glucagon

C;Keywords: amidated carboxyl end; brain; duplication; hormone; intestine; neuropeptide;

F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>

F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>

F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental

F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 93.7%; Score 134; DB 1; Length 55;

Best Local Similarity 96.4%; Pred. No. 5.4e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKKYLNSILN 55

RESULT 6

VRPG

vasoactive intestinal peptide precursor - pig (fragments)

N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)

C;Species: Sus scrofa domestica (domestic pig)

C;Date: 24-Apr-1984 #sequence revision 05-Jan-1996 #text_change 09-Jul-2004

C;Accession: A01549; A60300; A01550; J00417; A56754; S09690

R;Tatemoto, K.; Mutt, V.

Proc. Natl. Acad. Sci. U.S.A. 78, 6603-6607, 1981

A;Title: Isolation and characterization of the intestinal peptide porcine PHI (PHI-27),

A;Reference number: A01549; MUID:82082498; PMID:6947244

A:Accession: A01549
A:Molecule type: protein
A:Residues: 1-27 <TAT>
A:Cross-references: UNIPROT:P01284; UNIPARC:UPI00000351DB
R:Tatemoto, K.
Regul. Pept. 6, 330, 1983
A:Title: PHI - a new brain-gut peptide.
A:Reference number: A60300
A:Accession: A60300
A:Molecule type: protein
A:Residues: 1-27 <TA2>
A:Cross-references: UNIPARC:UPI00000351DB

R:Mutt, V.; Said, S.I.
Eur. J. Biochem. 42, 581-589, 1974

A:Title: Structure of the porcine vasoactive intestinal octacosapeptide. The amino-acid
A:Reference number: A01550; MUID:74167323; PMID:4829446
A:Accession: A01550
A:Molecule type: protein
A:Residues: 28-55 <MUT>
A:Cross-references: UNIPARC:UPI000002D1C0
R:Garavito, G.; Anderson, M.; Dimoline, R.; Joernvall, H.; Mutt, V.
Peptides 9, 469-474, 1988
A:Title: Isolation and characterization of a variant form of vasoactive intestinal poly-

A:Reference number: JT0417; MUID:88335763; PMID:2843830
A:Accession: JT0417
A:Molecule type: protein
A:Residues: 28-58 <GAF>
A:Cross-references: UNIPARC:UPI000002B99A
A:Note: This extended form is active in a VIP assay but is probably an incompletely pro-

R:Rodansky, M.; Klausner, Y.S.; Lin, C.Y.; Mutt, V.; Said, S.I.
J. Am. Chem. Soc. 96, 4973-4978, 1974
A:Reference number: A26231; MUID:74308014; PMID:4854585
A:Contents: annotation
A:Note: a 28-residue peptide having the sequence and biological activities (in two assay

R:Ichiki, Y.; Kitamura, K.; Kanagawa, K.; Kawamoto, M.; Matsuo, H.; Eto, T.
Biochem. Biophys. Res. Commun. 187, 1587-1593, 1992
A:Title: Organ distribution and characterization of porcine peptides (VIP, CGRP and PHI)
A:Reference number: A56754; MUID:93038640; PMID:1329741
A:Accession: A56754
A:Molecule type: protein
A:Residues: 1-24 <ICH>

A:Cross-references: UNIPARC:UPI0000173514
A:Experimental source: duodenum
A:Note: Sequence extracted from NCBI backbone (NCBIP:114219)
R:Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht,
Biochim. Biophys. Acta 1038, 355-359, 1990
A:Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A:Reference number: S09689; MUID:90254163; PMID:2340294
A:Contents: annotation
C:Comment: The biological source of vasoactive intestinal peptide is the duodenal mucosa
of myocardial contractility, stimulation of exocrine pancreatic secretion (in a secretin

C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; neuropeptide
F:1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F:27/Modified site: amidated carboxyl end (ile) (in mature form) #status experimental
F:55/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gly

Query Match 93.7%; Score 134; DB 1; Length 58;
Best Local Similarity 96.4%; Pred. No. 5.7e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 HSDAVFTFNTRLRKQMAVKYLSILN 28
DB 28 HSDAVFTFNTRLRKQMAVKYLSILN 55

RESULT 7

A60038
vasoactive intestinal peptide precursor - crab-eating macaque (fragment)
C:Species: Macaca fascicularis (crab-eating macaque)
C:Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C:Accession: A60038

R:Benson, D.L.; Isackson, P.J.; Jones, E.G.
Brain Res. Mol. Brain Res. 9, 169-174, 1991
A:Title: In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey ar
A:Reference number: A60038; MUID:91203476; PMID:1850073
A:Accession: A60038
A>Status: not compared with conceptual translation
A:Molecule type: mRNA
A:Residues: 1-145 <BEN>
A:Cross-references: UNIPROT:Q7M2Y9; UNIPARC:UPI000017662C
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi

Query Match 93.7%; Score 134; DB 2; Length 145;
Best Local Similarity 96.4%; Pred. No. 1.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 HSDAVFTFNTRLRKQMAVKYLSILN 28
DB 100 HSDAVFTFNTRLRKQMAVKYLSILN 127

RESULT 8

VSRU
vasoactive intestinal peptide precursor [validated] - human
N:Alternate names: VIP precursor
N:Contains: peptide histidine-methionine (PHM-27); peptide histidine-valine (PHV-42); vas
C:Species: Homo sapiens (man)
C:Date: 14-Nov-1983 #sequence_revision 14-Nov-1983 #text_change 09-Jul-2004
C:Accession: A23296; A93313; A60205; A26361; A27419; JH0618; I51955; I56494; I56988; A01:

R:Tsuakada, T.; Horovitch, S.J.; Montminy, M.R.; Mandel, G.; Goodman, R.H.
DNA 4, 293-300, 1985
A:Title: Structure of the human vasoactive intestinal polypeptide gene.
A:Reference number: A90952; MUID:86004065; PMID:3899557
A:Accession: A23296
A:Molecule type: DNA
A:Residues: 1-170 <TSU>

A:Cross-references: UNIPARC:UPI000003B343; GB:M11553; NID:G340243; PIDN:
A:Note: the authors translated the codon GAA for residue 48 as Gln
R:Itoh, N.; Obata, K.; Yanaihara, N.; Okamoto, H.
Nature 304, 547-549, 1983
A:Title: Human preprovasoactive intestinal polypeptide contains a novel PHI-27-like pepti

A:Reference number: A93313; MUID:83271523; PMID:6571696
A:Accession: A93313
A:Molecule type: mRNA
A:Residues: 1-170 <ITO>

A:Cross-references: UNIPARC:UPI000003B343; GB:L00157; GB:J00320; NID:G340277; PIDN:AAA61:

R:Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 48, 1136-1141, 1987

A:Title: Vasoactive intestinal peptide gene: putative mechanism of information storage at
A:Reference number: A60205; MUID:87140054; PMID:2434617
A:Accession: A60205
A:Molecule type: mRNA
A:Residues: 78-155 <GOZ>

A:Cross-references: UNIPARC:UPI000016B2F8; GB:M31645; GB:M32162; NID:G340250; PIDN:AAA61:
A:Note: this abundant mRNA from a human buccal tumor line contains an unspliced intron

R:Linder, S.; Barkhem, T.; Norberg, A.; Persson, H.; Schalling, M.; Hokfelt, T.; Magnusson
Proc. Natl. Acad. Sci. U.S.A. 84, 605-609, 1987
A:Title: Structure and expression of the gene encoding the vasoactive intestinal peptide
A:Reference number: A26361; MUID:87092456; PMID:3025882
A:Accession: A26361
A:Molecule type: DNA
A:Residues: 1-115, 'L', 117-135, 'G', 137-170 <LIN>

A:Cross-references: UNIPARC:UPI000016B2FA; GB:M14623; NID:G340271; PIDN:AAA61288.1; PID:G
A:Note: the authors translated the codon TTA for residue 116 as Ser and GGC for residue 1
R:Yiangou, Y.; Di Marzo, V.; Spokes, R.A.; Panico, M.; Morris, H.R.; Bloom, S.R.
J. Biol. Chem. 262, 14010-14013, 1987

A:Title: Isolation, characterization, and pharmacological actions of peptide histidine va
A:Reference number: A27419; MUID:88007645; PMID:3654650
A:Accession: A27419
A:Molecule type: protein
A:Residues: 81-122 <YIA>

A:Cross-references: UNIPARC:UPI00000351DE
R:Kitamura, K.; Kangawa, K.; Kawamoto, M.; Ichiki, Y.; Matsuo, H.; Eto, T.

Wed Feb 8 17:49:02 2006

Biochem. Biophys. Res. Commun. 185, 134-141, 1992
A>Title: Isolation and characterization of peptides which act on rat platelets, from a p
A:Reference number: JH0618; MUID:92287083; PMID:1318039
A:Accession: JH0618
A:Molecule type: protein
A:Residues: 123-152 <KIT>
A:Cross-references: UNIPARC:UPI000002D1C0
A:Experimental source: pheochromocytoma
R:Yamagami, T.; Ohsawa, K.; Nishizawa, M.; Inoue, C.; Gotoh, E.; Yanaiharu, N.; Yamamoto
Ann. N. Y. Acad. Sci. 527, 87-102, 1988
A>Title: Complete nucleotide sequence of human vasoactive intestinal peptide/PHM-27 gene
A:Reference number: I51955; MUID:88267775; PMID:2833091
A:Accession: I51955
A>Status: translated
A:Molecule type: DNA
A:Residues: 1-170 <RES>
A:Cross-references: UNIPARC:UPI000003B343; GB:M33027; NID:G340253; PIDN:AAA69515.1; PID:
R:Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 47, 1136-1141, 1987
A>Title: Vasoactive intestinal peptide gene: Putative mechanism of information storage a
A:Reference number: I56494
A:Accession: I56494
A>Status: preliminary; translated from GB/EMBL/DBBJ
A:Molecule type: DNA
A:Residues: 78-155 <RE2>
A:Cross-references: UNIPARC:UPI000016B2F8; GB:M32162; NID:G340250; PIDN:AAA61285.1; PID:
R:Bloom, S.R.; Christofides, N.D.; Delamarter, J.; Buell, G.; Kawashima, E.; Polak, J.M.
Lancet 2, 1163-1165, 1983
A>Title: Diarrhea in vipoma patients associated with cosecretion of a second active pep
A:Reference number: I56988; MUID:84066682; PMID:6139527
A:Accession: I56988
A>Status: preliminary; translated from GB/EMBL/DBBJ
A:Molecule type: mRNA
A:Residues: 50-170 <RE3>
A:Cross-references: UNIPARC:UPI000016B2F7; GB:M54930; NID:G340247; PIDN:AAAG3268.1; PID:
C:Genetics:
A:Gene: GDB:VIP
A:Cross-references: GDB:120490; OMIM:192320
A:Map position: 6q26-6q27
A:Introns: 36/2; 77/2; 112/2; 156/2
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; glycoprotein; hormone; intestine; neuro
F:1-20/Domain: signal sequence #status predicted <SIG>
F:81-107/Product: peptide histidine-valine (PHV-42) #status experimental <PHV>
F:81-107/Product: peptide histidine-methionine (PHM-27) #status experimental <PHM>
F:125-152/Product: vasoactive intestinal peptide #status experimental <VIP>
F:68,133/Binding site: carboxylate (Asn) (covalent) #status predicted
F:107/Modified site: amidated carboxyl end (Met) (amide in mature form from following gl
F:152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 93.7%; Score 134; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 1.7e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTFNTRLRKQMAVKKYLNSILN 152
RESULT 9
VRRT
vasoactive intestinal peptide precursor - rat
N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Rattus norvegicus (Norway rat)
C>Date: 28-Feb-1986 #sequence_revision 30-Jun-1993 #text change 09-Jul-2004
C:Accession: A60037; B60037; A01548; A28102; A60586; A60587; S09691
R:Giladi, E.; Shani, Y.; Gozes, I.
Brain Res. Mol. Brain Res. 7, 261-267, 1990
A>Title: The complete structure of the rat VIP gene.
A:Reference number: A60053; MUID:90244869; PMID:2159586
A:Accession: A60053
A:Molecule type: DNA
A:Residues: 1-170 <GIL>

A:Cross-references: UNIPROT:P01283; UNIPARC:UPI000013884A
A>Note: the authors translated the codon GAG for residue 67 as Gln
R:Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A>Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A:Reference number: A60037; MUID:91232388; PMID:1851524
A:Accession: B60037
A>Status: not compared with conceptual translation
A:Molecule type: DNA
A:Residues: 78-155 <LAM>
A:Cross-references: UNIPARC:UPI0000173511
R:Nishizawa, M.; Hayakawa, Y.; Yanaiharu, N.; Okamoto, H.
PEBS Lett. 183, 55-59, 1985
A>Title: Nucleotide sequence divergence and functional constraint in VIP precursor mRNA
A:Reference number: A01548; MUID:85154612; PMID:3838518
A:Accession: A01548
A:Molecule type: mRNA
A:Residues: 9-170 <NIS>
A:Cross-references: UNIPARC:UPI0000170B3; GB:X02341; NID:G57481; PIDN:CAA26200.1; PID:G:
A:Experimental source: cerebral cortex
R:Goetzl, E.J.; Sreedharan, S.P.; Turck, C.W.
J. Biol. Chem. 263, 9083-9086, 1988
A>Title: Structurally distinctive vasoactive intestinal peptides from rat basophilic leu
A:Reference number: A28102; MUID:88243784; PMID:3379062
A:Accession: A28102
A:Molecule type: protein
A:Residues: 134-152 <GOE>
A:Cross-references: UNIPARC:UPI00000351E4
A>Note: the source of this novel short form of VIP was rat basophilic leukemia cells
R:Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Rathe, J.; Robberecht, P.; Christ
Endocrinology 125, 1296-1302, 1989
A>Title: Peptide histidine isoleucineamide (PHI)-(1-27)-Gly as a new major form of PHI in
A:Reference number: A60586; MUID:89338237; PMID:2759027
A:Accession: A60586
A:Molecule type: protein
A:Residues: 81-108 <CAU>
A:Cross-references: UNIPARC:UPI0000173512
R:Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Robberecht, P.; Christophe, J.
Endocrinology 125, 2645-2655, 1989
A>Title: Variable distribution of three molecular forms of peptide histidine isoleucineam
A:Reference number: A60587; MUID:90005222; PMID:2792003
A:Accession: A60587
A:Molecule type: protein
A:Residues: 81-122 <CA2>
A:Cross-references: UNIPARC:UPI0000173513
R:Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, P.
Biochim. Biophys. Acta 1038, 355-359, 1990
A>Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A:Reference number: S09688; MUID:90254163; PMID:2340294
A:Contents: annotation; comparison of mammalian PHI sequences
C:Comment: Two active peptides are released from the VIP precursor by cleavage at paired
C:Genetics:
C:Introns: 36/2; 77/2; 156/2
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
F:1-21/Domain: signal sequence #status predicted <SIG>
F:81-122/Product: PHI-42 #status experimental <PH42>
F:81-108/Product: PHI-27-Gly #status experimental <PHIG>
F:81-107/Product: peptide histidine-isoleucine (PHI-27) #status predicted <PHI>
F:125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F:107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
F:133/Binding site: carboxylate (Asn) (covalent) #status predicted
F:152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 93.7%; Score 134; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 1.7e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTFNTRLRKQMAVKKYLNSILN 152

RESULT 10
A60037
N:Contains: intestinal peptide precursor - mouse
N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Mus musculus (house mouse)
C>Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C:Accession: A60037; 149386
R:Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A:Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A:Reference number: A60037; MUID:91232388; PMID:1851524
A:Accession: A60037
A:Status: not compared with conceptual translation
A:Molecule type: DNA
A:Residues: 1-170 <I>AM>
A:Cross-references: UNIPROT:P32648; UNIPARC:UPI000002171F
R:Sena, M.; Bravo, D.T.; Von Agoston, D.; Waschek, J.A.
DNA Seq. 5, 25-29, 1994
A:Title: High conservation of upstream regulatory sequences on the human and mouse vasoactive intestinal peptide precursor
A:Reference number: I49386; MUID:95201289; PMID:7894056
A:Accession: I49386
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 1-35 <RES>
A:Cross-references: UNIPARC:UPI000016D189; EMBL:X74297; NID:9895871; PIDN:CAA52350.1; PIDN:CAA52350.1; PIDN:CAA52350.1
C:Comment: Two active peptides are released from the VIP precursor by cleavage at paired basic residues
C:Genetics:
A:Gene: VIP
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone; F1-21/Domain: signal sequence #status predicted <SIG>
F1-21/Domain: signal sequence #status predicted <SIG>
F1-107/Product: PHI-27 #status predicted <PHI>
F1-125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F1-107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gly)
F1-133/Binding site: carbohydrate (Asn) (covalent) #status predicted
F1-152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gly)
Query Match 93.7%; Score 134; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 1.7e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNTYTLRKQMAVKKYLNSILN 152

RESULT 11
VRGP
N:Contains: intestinal peptide precursor - guinea pig (fragments)
N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Cavia porcellus (guinea pig)
C>Date: 31-Mar-1988 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
C:Accession: A26175; S09688; A57082; B60304
R:Du, B.H.; Eng, J.; Hulmes, J.D.; Chang, M.; Pan, Y.C.E.; Yalow, R.S.
Biochem. Biophys. Res. Commun. 128, 1093-1098, 1985
A:Title: Guinea pig has a unique mammalian VIP.
A:Reference number: A26175; MUID:85225523; PMID:4004849
A:Accession: A26175
A:Molecule type: protein
A:Residues: 28-55 <DUB>
A:Cross-references: UNIPROT:P04566; UNIPARC:UPI0000035182
R:Buscail, L.; Cauvin, A.; Gourlet, P.; Gossens, D.; de Neef, P.; Robbersrecht, Biochim. Biophys. Acta 1038, 355-359, 1990
A:Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A:Reference number: S09688; MUID:90254163; PMID:2340294
A:Accession: S09688
A:Molecule type: protein
A:Residues: 1-27 <BUS>
A:Cross-references: UNIPARC:UPI0000173516
A:Accession: A57082
A:Molecule type: protein
A:Residues: 28-55 <BU2>
A:Cross-references: UNIPARC:UPI0000173516

C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodilator
F1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F1-28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F1-121/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F1-121/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental
Query Match 84.6%; Score 121; DB 1; Length 55;
Best Local Similarity 82.1%; Pred. No. 4.6e-11;
Matches 23; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
DB 28 HSDALFTDNTYTLRKQMAVKKYLNSVLN 55

RESULT 12
VRCH
N:Contains: intestinal peptide precursor - chicken
C:Species: Gallus gallus (chicken)
C>Date: 24-Apr-1984 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C:Accession: S47470; A91425; A90720; A01551
R:Talbot, R.T.; Dunn, I.C.; Wilson, P.W.; Sang, H.M.; Sharp, P.J.
submitted to the EMBL Data Library, August 1994
A:Description: Evidence for alternative splicing of the chicken VIP gene.
A:Reference number: S47470
A:Accession: S47470
A:Molecule type: mRNA
A:Residues: 1-165 <TAL>
A:Cross-references: UNIPROT:P48143; UNIPARC:UPI000002B6C3; EMBL:X80906; NID:G531364; PIDN:G531364
R:Nilsson, A.
FEBS Lett. 60, 322-326, 1975
A:Title: Structure of the vasoactive intestinal octacosapeptide from chicken intestine. 1
A:Reference number: A91425; MUID:76210823; PMID:1227973
A:Accession: A91425
A:Molecule type: protein
A:Residues: 94-121 <NIL>
A:Cross-references: UNIPARC:UPI00000351E1
R:Bojarski, M.; Lin, C.Y.; Yiotakis, A.E.; Mutt, V.; Said, S.I.
Bioorg. Chem. 5, 339-350, 1976
A:Title: Vasoactive intestinal peptide (VIP) from chicken. Synthesis and properties of the
A:Reference number: A90720
A:Accession: A90720
A:Contents: synthesis
A:Molecule type: protein
A:Residues: 107-121 <BOD>
A:Cross-references: UNIPARC:UPI0000173517
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; neuropeptide
F1-25/Domain: signal sequence #status predicted <SIG>
F1-94-121/Product: vasoactive intestinal peptide #status experimental <MAT>
F1-121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following gly)
Query Match 83.2%; Score 119; DB 1; Length 165;
Best Local Similarity 85.2%; Pred. No. 2.9e-10;
Matches 23; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSIL 27
DB 94 HSDAVFTDNTYTLRKQMAVKKYLNSVL 120

RESULT 13
A60303
N:Contains: intestinal peptide - smaller spotted catshark
C:Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish)
C>Date: 10-Nov-1992 #sequence_revision 10-Nov-1992 #text_change 09-Jul-2004
C:Accession: A60303; A60314; S07432
R:Dimaline, R.; Thwaites, D.T.; Young, J.; Lee, C.M.; Thorndyke, M.C.
Regul. Pept. 18, 356, 1987
A:Title: A novel family of VIP-like peptides from the dogfish Scyliorhinus canicula.
A:Reference number: A60303
A:Accession: A60303

Search completed: January 25, 2006, 15:20:36
Job time : 13.25 secs

RESULT 15
JQ0361
vaccinative intestinal peptide - Atlantic cod (fragment)
C/Species: Gadus morhua (Atlantic cod)
C/Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 09-Jul-2004
C/Accession: JQ0361
R/Tiwates, D.T.; Young, J.; Thorndyke, M.C.; Dimaline, R.
Regul. Pept. 21, 436, 1988
A/Title: Isolation and Characterisation of two teleost VIP's.
A/Reference number: JQ0361

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:54:02 ; Search time 76 Seconds
(without alignments)
259.931 Million cell updates/sec

Title: US-10-626-719-2
Perfect score: 143
Sequence: 1 HSDAVFTNFTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt 05.80.*
1: uniprot_prot.*
2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB	ID	Description
1	134	93.7	28	1	VIP_CANFA	P63289 canis famil
2	134	93.7	28	1	VIP_CAPHI	P63290 capra hircu
3	134	93.7	28	1	VIP_MACMU	P84488 macaca mula
4	134	93.7	28	1	VIP_SHEEP	P63291 ovis aries
5	134	93.7	72	1	VIP_PIG	P01284 sus scrofa
6	134	93.7	72	1	VIP_RABIT	P32549 oryctolagus
7	134	93.7	118	2	Q5TCY7_HUMAN	Q5TCY7 homo sapien
8	134	93.7	145	2	Q7M2Y9_MACFA	Q7M2Y9 macaca fasc
9	134	93.7	153	2	Q7TSR4_9MURI	Q7TSR4 arvicanthris
10	134	93.7	169	2	Q5TCY8_HUMAN	Q5TCY8 homo sapien
11	134	93.7	170	1	VIP_BOVIN	P81401 bos taurus
12	134	93.7	170	1	VIP_HUMAN	P01282 homo sapien
13	134	93.7	170	1	VIP_MOUSE	P32548 mus musculus
14	134	93.7	170	1	VIP_RAT	P01283 rattus norv
15	134	93.7	170	2	Q5TCY9_HUMAN	Q5TCY9 homo sapien
16	134	93.7	171	2	Q9D2Z7_MOUSE	Q9D2Z7 mus muscu
17	121	84.6	72	1	VIP_CAVPO	P04566 cavia porce
18	119	83.2	28	1	VIP_ALLMI	P48142 alligator m
19	119	83.2	28	1	VIP_RANRI	P81016 rana ridibu
20	119	83.2	70	2	Q4TZX3_ANAPL	Q4TZX3 anas platyr
21	119	83.2	86	2	Q4TZY9_GAVES	Q4TZY9 anser anser
22	119	83.2	200	1	VIP_CHICK	P48143 gallus gall
23	119	83.2	200	1	VIP_MEIGA	P45644 melalegris g
24	119	83.2	202	2	Q7ZTG8_XENLA	Q7ZTG8 xenopus lae
25	118	82.5	28	1	VIP_SCYCA	P09685 scyliorhinu
26	118	82.5	28	2	Q9PR19_AMICA	Q9PR19 amia calva
27	118	82.5	147	2	Q4SQN2_TETNG	Q4SQN2 tetraodon n
28	114	79.7	28	2	Q9PRN8_CARAU	Q9PRN8 carassius a
29	111	77.6	28	1	VIP_DIDMA	P39089 didelphis m
30	108	75.5	25	1	VIP_GADMO	P09684 gadus morhu
31	101	70.6	38	2	Q75W85_MISAN	Q75W85 misgurnus a

ALIGNMENTS

RESULT 1

ID	VIP_CANFA	STANDARD;	PRT;	28 AA.
AC	P63289; P04565;			
DT	13-AUG-1987 (Rel. 05, Created)			
DT	13-AUG-1987 (Rel. 05, Last sequence update)			
DT	13-SEP-2005 (Rel. 48, Last annotation update)			
DE	Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide).			
GN	Name=VIP;			
OS	Canis familiaris (Dog).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;			
OC	Canis.			
OX	NCBI_TaxID=9615;			
RN	[1]			
RP	PROTEIN SEQUENCE.			
RX	MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;			
RA	Eng J., Du B.-H., Raufman J.-P., Yalow R.S.;			
RT	"Purification and amino acid sequences of dog, goat and guinea pig VIPs."			
RL	Peptides 7 Suppl. 1:17-20(1986).			
CC	!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.			
CC	!- SUBCELLULAR LOCATION: Secreted.			
CC	!- SIMILARITY: Belongs to the glucagon family.			
CC	This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL Outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.			
CC	PIR; A60304; A60304.			
DR	HSSP; P18509; IGSA.			
DR	Ensembl; ENSCAF00000000538; Canis familiaris.			
DR	InterPro; IPR000532; Glucagon.			
DR	Pfam; PF00123; Hormone 2; 1.			
DR	PRINTS; PR00275; GLUCAGON.			
DR	SMART; SM00070; GLUCA; 1.			
DR	PROSITE; PS00260; GLUCAGON; 1.			
KW	Amidation; Direct protein sequencing; Glucagon family; Hormone.			
FT	MOD_RES 28 28 Asparagine amide.			
SQ	SEQUENCE 28 AA; 3327 MW; EF313FB573FP6F3F CRC64;			

Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.6e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNFTLRKQMAVKYLSILN 28
|||||
DB 1 HSDAVFTNFTLRKQMAVKYLSILN 28
|||||

```

RESULT 2
ID_VIP_CAPHI STANDARD; PRT; 28 AA.
AC P63790; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name=VIP;
OS Capra hircus (Goat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Capra.
OX NCBI_TaxID=9925;
[1]
RN
RP
RX MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;
EN Eng J., Du B.-H., Raufman J.-P., Yalow R.S.;
RA "Purification and amino acid sequence of dog, goat and guinea pig
RT peptides."
RL Peptides 7 Suppl. 1:17-20(1986).
CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the glucagon family.
-----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL Outstation -
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CC removed.
-----
CC HSP; P18509; 1GEA.
DR InterPro: IPR000532; Glucagon.
DR Pfam: PF00123; Hormone_2; 1.
DR PRINTS: PR00275; GLUCAGON.
DR SMART: SM00070; GLUCA; 1.
DR PROSITE: PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD_RES 28 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF63F CRC64;

Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.6e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNYTLRKKQMAVKKYLNSILN 28
| | | | |
Db 1 HSDAVFTNYTLRKKQMAVKKYLNSILN 28

RESULT 3
ID_VIP_MACMU STANDARD; PRT; 28 AA.
AC P84488;
DT 13-SEP-2005 (Rel. 48, Created)
DT 13-SEP-2005 (Rel. 48, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name=VIP;
OS Macaca mulatta (Rhesus macaque).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopithecoidea; Cercopithecinae; Macaca.
OX NCBI_TaxID=9544;
[1]
RN
RP
RX MEDLINE=91164506; PubMed=2003150; DOI=10.1016/0167-0115(91)90005-2;
EN Yu J.-H., Xin Y., Eng J., Yalow R.S.;
RA "Purification and amino acid sequence of dog, goat and guinea pig
RT peptides."
RL Peptides 7 Suppl. 1:17-20(1986).
CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the glucagon family.
-----
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CC removed.
-----
CC HSP; P18509; 1GEA.
DR InterPro: IPR000532; Glucagon.
DR Pfam: PF00123; Hormone_2; 1.
DR PRINTS: PR00275; GLUCAGON.
DR SMART: SM00070; GLUCA; 1.
DR PROSITE: PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD_RES 28 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF63F CRC64;

Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.6e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNYTLRKKQMAVKKYLNSILN 28
| | | | |
Db 1 HSDAVFTNYTLRKKQMAVKKYLNSILN 28

RESULT 3
ID_VIP_MACMU STANDARD; PRT; 28 AA.
AC P84488;
DT 13-SEP-2005 (Rel. 48, Created)
DT 13-SEP-2005 (Rel. 48, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name=VIP;
OS Macaca mulatta (Rhesus macaque).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopithecoidea; Cercopithecinae; Macaca.
OX NCBI_TaxID=9544;
[1]
RN
RP
RX MEDLINE=91164506; PubMed=2003150; DOI=10.1016/0167-0115(91)90005-2;
EN Yu J.-H., Xin Y., Eng J., Yalow R.S.;
RA "Purification and amino acid sequence of dog, goat and guinea pig
RT peptides."
RL Peptides 7 Suppl. 1:17-20(1986).
CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the glucagon family.
-----
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CC use as long as its content is in no way modified and this statement is not
CC removed.
-----
CC HSP; P18509; 1GEA.
DR InterPro: IPR000532; Glucagon.
DR Pfam: PF00123; Hormone_2; 1.
DR PRINTS: PR00275; GLUCAGON.
DR SMART: SM00070; GLUCA; 1.
DR PROSITE: PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD_RES 28 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF63F CRC64;

Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.6e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNYTLRKKQMAVKKYLNSILN 28
| | | | |
Db 1 HSDAVFTNYTLRKKQMAVKKYLNSILN 28

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RX MEDLINE=74167323; PubMed=4829446;
RA Mutt V., Said S.I.;
RA "Structure of the porcine vasoactive intestinal octacosapeptide. The
RA amino-acid sequence. Use of kallikrein in its determination.";
RL Eur. J. Biochem. 42:581-589(1974).
RL [5]
RN SYNTHESIS OF VIP.
RN MEDLINE=74308014; PubMed=4854585;
RX Bodanszky M., Klausner Y.S., Lin C.Y., Mutt V., Said S.I.;
RA "Synthesis of the vasoactive intestinal peptide (VIP).";
RA J. Am. Chem. Soc. 96:4973-4978(1974).
RL CC -I- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
RL stimulates myocardial contractility, increases glycolysis and
RL relaxes the smooth muscle of trachea, stomach and gall bladder.
CC CC -I- FUNCTION: PHI also causes vasodilation.
CC CC -I- SUBCELLULAR LOCATION: Secreted.
CC CC -I- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC CC -I- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC PIR: A01549; VRPG.
CC HSHP; P18509; IGCA.
DR InterPro: IPR000532; Glucagon.
DR Pfam: PF00123; Hormone 2; 2.
DR PRINTS: PR00275; GLUCAGON.
DR DR PROSITE; PS00260; GLUCAGON; 2.
DR KW Adiation; Cleavage on pair of basic residues;
DR Direct protein sequencing; Glucagon family; Hormone.
FT PEPTIDE 1 27
FT 1 Intestinal peptide PHI-27.
FT 45 72 Vasoactive intestinal peptide.
FT MOD_RES 27 27 Isoleucine amide.
FT MOD_RES 72 72 Asparagine amide.
FT NON_TER 1 1
FT NON_TER 72 72
SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;
Query Match 93.7%; Score 134; DB 1; Length 72;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVTFNYTLRKQWAVKKYLSILN 28
Db 45 HSDAVTFDNYTLRKQWAVKKYLSILN 72
-----
RESULT 6
VIP_RABIT STANDARD; PRT; 72 AA.
AC P32649;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHI-27 (Peptide
DE histidine isoleucinamide 27); Vasoactive intestinal peptide (VIP
DE (Vasoactive intestinal polypeptide)] (Fragment).
DE Name=VIP;
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
OC Oryctolagus.
ON NCBI_TaxID=9986;
RX [1]
RX PROTEIN SEQUENCE.
RC TISSUE=Small intestine;
RX MEDLINE=90259845; PubMed=2342988; DOI=10.1016/0196-9781(90)90120-T;
RA Gossen D., Buscail L., Cauvin A., Gourlet P., de Neef P., Rathe J.,
RA Robberecht P., Vandermeers-Piret M.C., Vandermeers A., Christophe J.;

```

"Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.";
RT Peptide 11:123-128(1990).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC HSSP; P18509; IGEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone.
FT PEPTIDE 1 27 Intestinal peptide PHI-27.
FT PEPTIDE 45 72 Vasoactive intestinal peptide.
FT MOD_RES 27 27 Isoleucine amide.
FT MOD_RES 72 72 Asparagine amide.
FT MOD_RES 1 1
FT NON_TER 72 72
FT NON_TER 1 1
SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0B5C3CA3A CRC64;

Query Match 93.7%; Score 134; DB 1; Length 72;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYTLRKQMAVKKYLNSILN 28
Db 45 HSDAVFTDNYTLRKQMAVKKYLNSILN 72
|||||

RESULT 7
Q5TCY7 HUMAN
ID Q5TCY7_HUMAN PRELIMINARY; PRT; 118 AA.
AC Q5TCY7;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide (Fragment).
GN Name=VIP; ORFNames=RP4-546K19.1-003;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL33356; CA21766.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON_TER 1 1
FT NON_TER 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;
SQ SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;

Query Match 93.7%; Score 134; DB 2; Length 118;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;

RT Peptide 11:123-128(1990).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC HSSP; P18509; IGEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone.
FT PEPTIDE 1 27 Intestinal peptide PHI-27.
FT PEPTIDE 45 72 Vasoactive intestinal peptide.
FT MOD_RES 27 27 Isoleucine amide.
FT MOD_RES 72 72 Asparagine amide.
FT MOD_RES 1 1
FT NON_TER 72 72
FT NON_TER 1 1
SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0B5C3CA3A CRC64;

Query Match 93.7%; Score 134; DB 1; Length 72;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYTLRKQMAVKKYLNSILN 28
Db 45 HSDAVFTDNYTLRKQMAVKKYLNSILN 72
|||||

RESULT 7
Q5TCY7 HUMAN
ID Q5TCY7_HUMAN PRELIMINARY; PRT; 118 AA.
AC Q5TCY7;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide (Fragment).
GN Name=VIP; ORFNames=RP4-546K19.1-003;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL33356; CA21766.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON_TER 1 1
FT NON_TER 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;
SQ SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;

Query Match 93.7%; Score 134; DB 2; Length 118;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYTLRKQMAVKKYLNSILN 28
Db 100 HSDAVFTDNYTLRKQMAVKKYLNSILN 127
|||||

RESULT 9
Q7TSR4 9MURI
ID Q7TSR4_9MURI PRELIMINARY; PRT; 153 AA.
AC Q7TSR4;
DT 01-OCT-2003 (TrEMBLrel. 25, Created)
DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE Vasoactive intestinal polypeptide (Fragment).
OS Arvicanthia ansorgei.
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Murinae; Arvicanthis.
OX NCBI_TaxID=204747;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Dardente H., Menet J.S., Tournier B.B., Challet E., Pevet P.,
RA Masson-Pevet M.;
RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.
DR EMBL; AY225375; AAP15167.1; -; mRNA.
DR HSSP; P18509; IGEA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.

DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON_TER 1
SQ SEQUENCE 153 AA; 17171 MW; 9C15095D6E147A15 CRC64;
Query Match 93.7%; Score 134; DB 2; Length 153;
Best Local Similarity 96.4%; Pred. No. 4.7e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTFNYYTLRKQMAVKYILNSILN 28
Db 108 HSDAVFTDNYTLRKQMAVKYILNSILN 135
RESULT 10
Q5TCY8 HUMAN
AC Q5TCY8_HUMAN PRELIMINARY; PRT; 169 AA.
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DE 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-002;
OS Homo sapiens (Human)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CA121765.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 169 AA; 19081 MW; F325BDFEF47132C3 CRC64;
Query Match 93.7%; Score 134; DB 2; Length 169;
Best Local Similarity 96.4%; Pred. No. 5.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTFNYYTLRKQMAVKYILNSILN 28
Db 124 HSDAVFTDNYTLRKQMAVKYILNSILN 151
RESULT 11
VIP_BOVIN
AC F81401; Q8MI77;
DT 15-DEC-1998 (Rel. 37, Created)
DT 25-OCT-2004 (Rel. 45, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHI-27 (Peptide histidine isoleucinamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Bos taurus (Bovine)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22092342; PubMed=12097482;
RA Hamelink C., Lee H.-W., Chen Y., Grimaldi M., Eiden L.E.;
RT "Coincident elevation of cAMP and calcium influx by PACAP-27 synergistically regulates vasoactive intestinal polypeptide gene transcription through a novel PKA-independent signaling pathway."; J. Neurosci. 22:5310-5320(2002).
RN [2]
RP PROTEIN SEQUENCE OF 81-107.
RC TISSUE=Duodenum;

RX MEDLINE=85027215; PubMed=6548446;
RA Carlquist M., Kaiser R., Tatemoto K., Joernvall H., Mutt V.;
RT "A novel form of the polypeptide PHI isolated in high yield from bovine upper intestine. Relationships to other peptides of the glucagon-secretin family."; Eur. J. Biochem. 144:243-247(1984).
RL [3]
RN PROTEIN SEQUENCE OF 125-152.
RC TISSUE=Intestine;
RX MEDLINE=80092152; PubMed=520589; DOI=10.1016/0014-5793(79)80587-6;
RA Carlquist M., Mutt V., Joernvall H.;
RT "Isolation and characterization of bovine vasoactive intestinal peptide (VIP)."; FEBS Lett. 108:457-460(1979).
RL FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
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CC -----
DR EMBL; AF503910; AAM28152.1; -; mRNA.
DR HSSP; F18509; IGEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 25 Potential.
FT PROPEP 26 79 Intestinal peptide PHI-27.
FT PEPTIDE 81 107 Vasoactive intestinal peptide.
FT PROPEP 111 122 Isoleucine amide (G-108 provides amide group).
FT PEPTIDE 125 152 Asparagine amide (G-153 provides amide group).
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT MOD_RES 152 152
SQ SEQUENCE 170 AA; 19165 MW; 9C6A6049AF7BFF81 CRC64;
Query Match 93.7%; Score 134; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 5.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTFNYYTLRKQMAVKYILNSILN 28
Db 125 HSDAVFTDNYTLRKQMAVKYILNSILN 152
RESULT 12
VIP_HUMAN
ID VIP_HUMAN STANDARD; PRT; 170 AA.
AC P01282; Q96QK3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHI-42; Intestinal peptide PHM-27 (Peptide histidine methioninamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OX Homo.
RN NCBI_TaxID=9606;
RN [1] NUCLEOTIDE SEQUENCE.
RX MEDLINE=83271523; PubMed=6571696;
RA Itoh N., Obata K.-I., Yanaiharu N., Okamoto H.;
RX "Human preprovasoactive intestinal polypeptide contains a novel PHI-
RT 27-like peptide, PHM-27";
RL Nature 304:547-549(1983).
RN [2] NUCLEOTIDE SEQUENCE.
RX MEDLINE=88267775; PubMed=2839091;
RA Yamagami T., Ohsawa K., Nishizawa M., Inoue C., Gotoh E.,
RA Yanaiharu N., Yamamoto H., Okamoto H.;
RT "Complete nucleotide sequence of human vasoactive intestinal
RT peptide/PHM-27 gene and its inducible promoter";
RL Ann. N. Y. Acad. Sci. 527:87-102(1988).
RN [3] NUCLEOTIDE SEQUENCE.
RX MEDLINE=86004065; PubMed=3899557;
RA Tsukada T., Horovitch S.J., Montminy M.R., Mandel G., Goodman R.H.;
RT "Structure of the human vasoactive intestinal polypeptide gene";
RL DNA 4:293-300(1985).
RN [4] NUCLEOTIDE SEQUENCE.
RX MEDLINE=87092456; PubMed=3025882;
RA Linder S., Barkhem T., Norberg A., Persson H., Schalling M.,
RA Hoekfelt T., Magnusson G.;
RT "Structure and expression of the gene encoding the vasoactive
RT intestinal peptide precursor";
RL Proc. Natl. Acad. Sci. U.S.A. 84:605-609(1987).
RN [5] NUCLEOTIDE SEQUENCE.
RX MEDLINE=86016352; PubMed=2995945; DOI=10.1016/0196-9781(85)90016-6;
RA Delamarier J.F., Buell G.N., Kawashima E., Polak J.M., Bloom S.R.;
RT "Vasoactive intestinal peptide: expression of the prohormone in
RT bacterial cells";
RL Peptides 6:95-102(1985).
RN [6] NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RX TISSUE=Prostate; PubMed=12477932; DOI=10.1073/pnas.242603899;
RX MEDLINE=22398257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Klausner R.D., Feingold E.A., Grouse L.H., Derge J.G.,
RA Altshuler S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heish F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Uedin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abranson R.D., Mullaby S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahy J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko V., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smalus D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences".
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [7] NUCLEOTIDE SEQUENCE OF 8-170.
RX MEDLINE=86313155; PubMed=3748844; DOI=10.1016/0196-9781(86)90156-7;
RA Gozes I., Bodener M., Shani Y., Fridkin M.;
RT "Structure and expression of the vasoactive intestinal peptide (VIP)
RT gene in a human tumor";
RL Peptides 7:11-6(1986).
RN [8] NUCLEOTIDE SEQUENCE OF 50-170.
RX TISSUE=Pancreatic carcinoma;
RN [9] NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=87140054; PubMed=2434617;
RA Gozes I., Giladi E., Shani Y.;
RT "Vasoactive intestinal peptide gene: putative mechanism of information
RT storage at the RNA level";
RL J. Neurochem. 47:1136-1141(1987).
RN [10] PROTEIN SEQUENCE OF 81-122.
RX MEDLINE=88007645; PubMed=3654650;
RA Yangou Y., di Marzo V., Spokes R.A., Panico M., Morris H.R.,
RA Bloom S.R.;
RT "Isolation, characterization, and pharmacological actions of peptide
RT histidine valine 42, a novel prepro-vasoactive intestinal peptide-
RT derived peptide";
RL J. Biol. Chem. 262:14010-14013(1987).
RN [11] PROTEIN SEQUENCE OF 127-152.
RX TISSUE=Pheochromocytoma;
RX MEDLINE=92287083; PubMed=1318039;
RA Kitamura K., Kangawa K., Kawamoto M., Ichiki Y., Matsuo H., Eto T.;
RT "Isolation and characterization of peptides which act on rat
RT platelets, from a pheochromocytoma";
RL Biochem. Biophys. Res. Commun. 185:134-141(1992).
RN [12] STRUCTURE BY NMR OF VIP.
RX MEDLINE=91322343; PubMed=1863695;
RA Theriault Y., Boulanger Y., St Pierre S.;
RT "Structural determination of the vasoactive intestinal peptide by two-
RT dimensional H-NMR spectroscopy";
RL Biopolymers 31:459-464(1991).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHM and PHV also cause vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
DR EMBL: L00157; AAA61289.1; -; Genomic DNA.
DR EMBL: L00154; AAA61289.1; JOINED; Genomic DNA.
DR EMBL: L00155; AAA61289.1; JOINED; Genomic DNA.
DR EMBL: L00156; AAA61289.1; JOINED; Genomic DNA.
DR EMBL: M33027; AAA69515.1; -; Genomic DNA.
DR EMBL: M11553; AAA61284.1; -; Genomic DNA.
DR EMBL: M11549; AAA61284.1; JOINED; Genomic DNA.
DR EMBL: M11550; AAA61284.1; JOINED; Genomic DNA.
DR EMBL: M11551; AAA61284.1; JOINED; Genomic DNA.
DR EMBL: M11552; AAA61284.1; JOINED; Genomic DNA.
DR EMBL: M14623; AAA61288.1; -; Genomic DNA.
DR EMBL: M14619; AAA61288.1; JOINED; Genomic DNA.
DR EMBL: M14620; AAA61288.1; JOINED; Genomic DNA.
DR EMBL: M14621; AAA61288.1; JOINED; Genomic DNA.
DR EMBL: M14622; AAA61288.1; JOINED; Genomic DNA.
DR EMBL: M36606; AAA61286.1; JOINED; Genomic DNA.
DR EMBL: M36607; AAA61286.1; JOINED; Genomic DNA.
DR EMBL: M36608; AAA61286.1; JOINED; Genomic DNA.
DR EMBL: M36609; AAA61286.1; JOINED; Genomic DNA.
DR EMBL: BC009794; AAH09794.1; -; mRNA.
DR EMBL: M36634; AAA61287.1; -; mRNA.


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DR EMBL; M54930; AA63268.1; -; mRNA.
DR EMBL; M32162; AAA61285.1; -; Genomic DNA.
DR EMBL; M31645; AAA61285.1; JOINED; Genomic DNA.
DR PIR; A23296; VRHU.
DR DR HSSP; P18509; 1GEA.
DR Ensembl; ENSG00000146469; Homo sapiens.
DR HGNC; HGNC:12693; VIP.
DR H-InvDB; HIX0006306; -.
DR MIM; 192320; -.
DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
DR GO; GO:0007589; P:fluid secretion; TAS.
DR GO; GO:0007186; P:G-protein coupled receptor protein signaling; TAS.
DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; Hormone 2; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 20 Potential.
FT PROPEP 21 79
FT PEPTIDE 81 122 Intestinal peptide PHV-42.
FT PEPTIDE 81 107 Intestinal peptide PHM-27.
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107 Methionine amide (G-108 provides amide group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group).
FT CONFLICT 96 97 QL -> PP (in Ref. 7).
FT CONFLICT 113 113 Missing (in Ref. 6).
FT CONFLICT 116 116 S -> L (in Ref. 4).
FT CONFLICT 136 136 R -> G (in Ref. 4).
SQ SEQUENCE 170 AA; 19169 MW; 93EC0177F89508FD CRC64;

Query Match 93.7%; Score 134; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 5.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNTYLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNTYLRKQMAVKKYLNSILN 152

RESULT 13
VIP_MOUSE STANDARD; PRT; 170 AA.
AC P32648;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
DE polypeptide)].
GN Name=Vip;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-1;
RA Lamperti E.D.; Rosen K.M.; Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
RT polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 1-36.
RC STRAIN=C57BL/6; TISSUE=Spleen;
RX MEDLINE=95201289; PubMed=7894056;
RA Sena D.T.; Agoston D.; Waschek J.A.;

```

"High conservation of upstream regulatory sequences on the human and mouse vasoactive intestinal peptide (VIP) genes.";

CC - FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.

CC - FUNCTION: PHM also causes vasodilation.

CC - SUBCELLULAR LOCATION: Secreted.

CC - SIMILARITY: Belongs to the glucagon family.

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CC -----

DR EMBL; X74297; CAA52350.1; -; Genomic DNA.

DR PIR; A60037; A60037.

DR HSSP; P18509; 1GEA.

DR Ensembl; ENSMUSG00000019772; Mus musculus.

DR MGI; MGI:98933; Vip.

DR GO; GO:0005615; C:extracellular space; TAS.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone 2; 2.

DR PRINTS; PR00275; Hormone 2; 2.

DR PROSITE; PS00260; GLUCAGON; 2.

DR PROSITE; PS00260; GLUCAGON; 2.

KW Amidation; Cleavage on pair of basic residues; Glucagon family; Glycoprotein; Hormone; Signal.

FT SIGNAL 1 21 By similarity.

FT PROPEP 22 79

FT PEPTIDE 81 122 Intestinal peptide PHI-42 (By similarity).

FT PEPTIDE 81 107 Intestinal peptide PHI-27.

FT PEPTIDE 125 152 Vasoactive intestinal peptide.

FT PROPEP 156 170

FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide group).

FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group).

FT CARBOHYD 133 133 N-linked (GlcNAc...) (Potential).

FT SEQUENCE 170 AA; 19049 MW; 0164C831F8F5C73D CRC64;

Query Match 93.7%; Score 134; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 5.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNTYLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNTYLRKQMAVKKYLNSILN 152

RESULT 14
VIP_RAT STANDARD; PRT; 170 AA.
AC P01283;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
DE polypeptide)].
GN Name=Vip;
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=90244869; PubMed=2159586; DOI=10.1016/0169-328X(90)90036-D;
RA Giladi E.; Shani Y.; Gozes I.;
RT "The complete structure of the rat VIP gene.";

```
RL Brain Res. Mol. Brain Res. 7:261-267(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 9-170.
RC TISSUE=Brain cortex;
RX MEDLINE=85154612; PubMed=3038518; DOI=10.1016/0014-5793(85)80953-4;
RA Niehizawa M., Hayakawa Y., Yanaihara N., Okamoto H.;
RT "Nucleotide sequence divergence and functional constraint in VIP
RT precursor mRNA evolution between human and rat.";
RL FEBS Lett. 183:55-59(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
RT polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [4]
RP PROTEIN SEQUENCE OF 134-152.
RX MEDLINE=88243784; PubMed=3379062;
RA Goetzi E.J., Sreedharan S.P., Turk C.W.;
RT "Structurally distinctive vasoactive intestinal peptides from rat
RT basophilic leukemia cells.";
RL J. Biol. Chem. 263:9083-9086(1988).
CC -I- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -I- FUNCTION: PHI also causes vasodilation.
CC -I- SUBCELLULAR LOCATION: Secreted.
CC -I- SIMILARITY: Belongs to the glucagon family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR EMBL; X02341; CAA26200.1; -; mRNA.
DR F01850; VRR1.
DR HSP; F18509; IGEA.
DR Ensembl; ENSRNOG00000018808; Rattus norvegicus.
DR RGD; 621647; Vip.
DR GO; GO:0042311; P:vasodilation; NAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR0275; GLUCAGON
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;
KW Signal.
FT SIGNAL 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT -----
FT PEPTIDE 81 107 Intestinal peptide PHV-42 (By
FT PEPTIDE 125 152 similarity).
FT PROPEP 156 170 Intestinal peptide PHI-27.
FT MOD_RES 107 107 Vasoactive intestinal peptide.
FT -----
FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide
FT -----
FT MOD_RES 152 152 group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide
FT -----
FT CARBOHYD 68 68 group).
FT CARBOHYD 133 133 N-linked (GlcNAc. . .) (Potential).
FT SEQUENCE 170 AA; 19079 MW; 202AEE82EBBD190B CRC64;
SQ
Query Match 93.7%; Score 134; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 5.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNTYTLRKQMAVKKYLNSILN 152
```

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RESULT 15
QSTCY9 HUMAN PRELIMINARY; PRT; 170 AA.
AC QSTCY9;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-001;
OS Homo sapiens (Human)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX [1]
RN NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CAI21764.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 170 AA; 19168 MW; 93EC0177F89508FD CRC64;

Query Match 93.7%; Score 134; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 5.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNTYTLRKQMAVKKYLNSILN 152

Search completed: January 25, 2006, 15:18:39
Job time : 77 secs
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GenCore version 5.1.6
Copyright (c) 1993 - 2006 Compugen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-3
Perfect score: 142
Sequence: 1 HSDAVTKNYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_21.*
1: geneseqp1980s.*
2: geneseqp1990s.*
3: geneseqp2000s.*
4: geneseqp2001s.*
5: geneseqp2002s.*
6: geneseqp2003as.*
7: geneseqp2003bs.*
8: geneseqp2004s.*
9: geneseqp2005s.*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	138	97.2	28	5 ABG94141	Abg94141 Human vas
2	137	96.5	28	5 ABG94140	Abg94140 Human vas
3	137	96.5	28	5 ABG94139	Abg94139 Human vas
4	136	95.8	28	1 AAP10172	Aap10172 VIP. 3/20
5	136	95.8	28	1 AAP71039	Aap71039 Sequence
6	136	95.8	28	2 AAR34943	Aar34943 Porcine V
7	136	95.8	28	2 AAR40272	Aar40272 Native VI
8	136	95.8	28	2 AAR53111	Aar53111 Bronchodi
9	136	95.8	28	2 AAR53109	Aar53109 Bronchodi
10	136	95.8	28	2 AAR53110	Aar53110 Bronchodi
11	136	95.8	28	2 AAR87092	Aar87092 Vasoactiv
12	136	95.8	28	2 AAR83785	Aar83785 VIP. 2/19
13	136	95.8	28	2 AAR97810	Aar97810 Vasoactiv
14	136	95.8	28	2 AAR93023	Aar93023 Human glu
15	136	95.8	28	2 AAW65188	Aaw65188 Vasoactiv
16	136	95.8	28	2 AAW06120	Aaw06120 Human VIP
17	136	95.8	28	2 AAW06119	Aaw06119 Mouse VIP
18	136	95.8	28	2 AAW06114	Aaw06114 Rabbit VI
19	136	95.8	28	2 AAW06113	Aaw06113 Macaque V
20	136	95.8	28	2 AAW06121	Aaw06121 Pig VIP p
21	136	95.8	28	2 AAW06122	Aaw06122 Goat VIP p
22	136	95.8	28	2 AAW06115	Aaw06115 Dog VIP p
23	136	95.8	28	2 AAW06112	Aaw06112 Sheep VIP
24	136	95.8	28	2 AAW37791	Aaw37791 Vasoactiv

25	136	95.8	28	2 AAW71677	Aaw71677 Vasoactiv
26	136	95.8	28	2 AAY30769	Aay30769 Vasoactiv
27	136	95.8	28	2 AAY44196	Aay44196 Human vas
28	136	95.8	28	3 AAY94560	Aay94560 Vasoactiv
29	136	95.8	28	4 AAB85707	Aab85707 Peptide h
30	136	95.8	28	4 AAB85710	Aab85710 Peptide h
31	136	95.8	28	4 AAB91279	Aab91279 Vasoactiv
32	136	95.8	28	4 AAB91278	Aab91278 Vasoactiv
33	136	95.8	28	4 AAE12028	Aae12028 Porcine v
34	136	95.8	28	4 AAB37111	Aab37111 Human vas
35	136	95.8	28	4 AAG70459	Aag70459 Vasoactiv
36	136	95.8	28	4 AAB50845	Aab50845 Human pro
37	136	95.8	28	4 AAU09653	Aau09653 Porcine i
38	136	95.8	28	4 AAB45614	Aab45614 Native va
39	136	95.8	28	5 AAE19604	Aae19604 Human ste
40	136	95.8	28	5 AAE19627	Aae19627 Human vas
41	136	95.8	28	5 AAE19603	Aae19603 Human vas
42	136	95.8	28	5 ABB06677	Abb06677 Mammalian
43	136	95.8	28	5 AAU85989	Aau85989 Modified
44	136	95.8	28	5 AAU97783	Aau97783 Tumour sp
45	136	95.8	28	5 ABG94138	Abg94138 Human vas

ALIGNMENTS

RESULT 1
ABG94141
ID ABG94141 standard; peptide; 28 AA.
XX AC ABG94141;
XX DT 27-NOV-2002 (first entry)
XX DE Human vasoactive intestinal polypeptide (VIP) analogue #189.
XX KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.
XX OS Unidentified.
XX PN US2002099003-A1.
XX PD 25-JUL-2002.
XX 13-AUG-2001; 2001US-00929818.
XX 28-OCT-1997; 97US-00959057.
XX 28-OCT-1997; 97US-00959064.
XX 27-OCT-1998; 98US-00181316.
XX 04-FEB-2000; 2000US-00498522.
XX (WILS/) WILSON L F.
XX (PLAC/) PLACE V A.
XX PA Wilson LF, Place VA;
XX PI WPI; 2002-697729/75.
XX DR Treating sexual dysfunction in females comprises administering vasoactive
XX PT intestinal polypeptide or against to vagina and/or vulvar region.
XX PS Claim 19; Page; 19pp; English.
XX CC The invention relates to a method for treating sexual dysfunction in
XX females comprising administering a formulation comprising a vasoactive
XX agent comprising a vasoactive intestinal polypeptide and/or agonist to
XX the vagina and/or vulvar region. The method is used for preventing

CC vaginal atrophy and pain during intercourse, for treating vaginal itching

CC and dryness, for enhancing sexual desire and responsiveness in females

CC and for maintaining improvement of the tissue health of the female

CC genitalia. The method is also used for treating persistent or recurrent

CC deficiency or absence of sexual fantasies and desire for sexual activity,

CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple

CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,

CC diabetes mellitus, substance-induced decreases in sexual desire and

CC responsiveness and primary and secondary anorgasmia. The formulation

CC improves vaginal muscle tone and tissue health, increases vaginal

CC lubrication and minimises collagen misdeposition resulting from hypoxia.

CC This sequence represents a human vasoactive intestinal polypeptide (VIP)

CC analogue with agonist and/or antagonist activity. Note: The present

CC sequence is not featured in the printed specification but was derived

CC from the wild-type peptide shown in ABG93952

XX

SX Sequence 28 AA;

Query Match 97.2%; Score 138; DB 5; Length 28;

Best Local Similarity 96.4%; Pred. No. 2.2e-10;

Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28

|||||:|||||:|||||:|||||:|||||

Db 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

RESULT 2

ABG94140

ID ABG94140 standard; peptide; 28 AA.

XX

AC ABG94140;

XX

DT 27-NOV-2002 (first entry)

XX

DE Human vasoactive intestinal polypeptide (VIP) analogue #188.

XX

Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;

KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;

KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;

KW sexual aversion; menopausal state; post-menopausal state; sexual desire;

KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;

KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;

KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.

XX

OS Unidentified.

XX

US2002099003-A1.

XX

PD 25-JUL-2002.

XX

PF 13-AUG-2001; 2001US-00929818.

XX

XX 28-OCT-1997; 97US-00959057.

PR 28-OCT-1997; 97US-00959064.

PR 27-OCT-1998; 98US-00181316.

PR 04-FEB-2000; 2000US-00498522.

XX

XX (WILS/) WILSON L F.

PA (PLAC/) PLACE V A.

XX

XX Wilson LF, Place VA;

PI

XX WPI; 2002-697729/75.

DR

XX Treating sexual dysfunction in females comprises administering vasoactive

PT intestinal polypeptide or against to vagina and/or vulvar region.

XX

XX Claim 19; Page; 19pp; English.

PS

XX The invention relates to a method for treating sexual dysfunction in

CC females comprising administering a formulation comprising a vasoactive

CC agent comprising a vasoactive intestinal polypeptide and/or agonist to

CC the vagina and/or vulvar region. The method is used for preventing

CC vaginal atrophy and pain during intercourse, for treating vaginal itching

CC and dryness, for enhancing sexual desire and responsiveness in females

CC and for maintaining improvement of the tissue health of the female

CC genitalia. The method is also used for treating persistent or recurrent

CC deficiency or absence of sexual fantasies and desire for sexual activity,

CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple

CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,

CC diabetes mellitus, substance-induced decreases in sexual desire and

CC responsiveness and primary and secondary anorgasmia. The formulation

CC improves vaginal muscle tone and tissue health, increases vaginal

CC lubrication and minimises collagen misdeposition resulting from hypoxia.

CC This sequence represents a human vasoactive intestinal polypeptide (VIP)

CC analogue with agonist and/or antagonist activity. Note: The present

CC sequence is not featured in the printed specification but was derived

CC from the wild-type peptide shown in ABG93952

XX

SX Sequence 28 AA;

Query Match 96.5%; Score 137; DB 5; Length 28;

Best Local Similarity 96.4%; Pred. No. 2.9e-10;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28

|||||:|||||:|||||:|||||:|||||

Db 1 HSDAVFTNNYTRLRKQMAVKKYLNSILN 28

RESULT 3

ABG94139

ID ABG94139 standard; peptide; 28 AA.

XX

AC ABG94139;

XX

DT 27-NOV-2002 (first entry)

XX

DE Human vasoactive intestinal polypeptide (VIP) analogue #187.

XX

Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;

KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;

KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;

KW sexual aversion; menopausal state; post-menopausal state; sexual desire;

KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;

KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;

KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.

XX

OS Unidentified.

XX

US2002099003-A1.

XX

PD 25-JUL-2002.

XX

PF 13-AUG-2001; 2001US-00929818.

XX

XX 28-OCT-1997; 97US-00959057.

PR 28-OCT-1997; 97US-00959064.

PR 27-OCT-1998; 98US-00181316.

PR 04-FEB-2000; 2000US-00498522.

XX

XX (WILS/) WILSON L F.

PA (PLAC/) PLACE V A.

XX

XX Wilson LF, Place VA;

PI

XX WPI; 2002-697729/75.

DR

XX Treating sexual dysfunction in females comprises administering vasoactive

PT intestinal polypeptide or against to vagina and/or vulvar region.

XX

XX Claim 19; Page; 19pp; English.

PS

XX The invention relates to a method for treating sexual dysfunction in

CC females comprising administering a formulation comprising a vasoactive

CC agent comprising a vasoactive intestinal polypeptide and/or agonist to
 CC the vagina and/or vulvar region. The method is used for preventing
 CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952

XX Sequence 28 AA;

Query Match 96.5%; Score 137; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.9e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNTYTLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTSNYTLRKQMAVKKYLNSILN 28

RESULT 4

AAP10172
 ID AAP10172 standard; peptide; 28 AA.

XX AAP10172;

DT 25-MAR-2003 (revised)

DT 21-DEC-1992 (first entry)

XX VIP.

KW Vasoactive intestinal polypeptide;
 KW allergic asthma. chemical mediator isolation-inhibiting action.

XX Homo sapiens.

XX JP56128721-A.

PD 08-OCT-1981.

XX 12-MAR-1980; 80JP-00030308.

PR 12-MAR-1980; 80JP-00030308.

XX (EISA) EISAI CO LTD.

DR WPI; 1981-86052D/47.

PT Antiallergic agent comprises peptide - contg. 28 amino acid unite, is
 PT active against e.g. bronchial asthma and hay fever.

PS Claim 1; Page 1; 3pp; Japanese.

CC The sequence given can be used as the active component in an antiallergic
 CC agent. Vasoactive intestinal polypeptide (VIP) has chemical mediator
 CC isolation-inhibiting action and is effective for therapy and prevention
 CC of various allergic diseases, such as allergic rhinitis, bronchial
 CC asthma, allergic asthma, hay fever, urticaria, eczema, atopic dermatitis
 CC etc. Since it also has specific bronchial smooth muscle relaxant action,
 CC it is esp. useful for treating and preventing bronchial and allergic
 CC asthma. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
 CC 2003 to correct PA field.)

XX Sequence 28 AA;

Query Match 95.8%; Score 136; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 3.9e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNTYTLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 5

AAP71039
 ID AAP71039 standard; peptide; 28 AA.

XX AAP71039;

DT 03-OCT-2002 (revised)

DT 05-APR-1991 (first entry)

XX Sequence of active ingredient in hair growth promoting compsn.

KW Vasoactive intestinal tract polypeptide; digestive tract polypeptide;
 KW hair growth promoter.

XX Synthetic.

XX EP225639-A.

PD 16-JUN-1987.

XX 10-DEC-1986; 86EP-00117190.

XX 10-DEC-1985; 85JP-00276099.

XX (MEIJ) MEIJI SEIKA KAISHA.

XX Yanaihara N, Watanabe S, Kasai M, Sato T, Kikkaji T;

DR WPI; 1987-164873/24.

PT Hair growth promoting compsn. - contg. vasoactive intestinal polypeptide
 PT and carrier.

XX Claim 1; Page 8; 10pp; English.

CC When applied to the skin, the peptide causes a local increase in blood
 CC flow and promotes hair growth. It is the natural peptide known as
 CC vasoactive intestinal polypeptide which has been isolated from the
 CC digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)

XX Sequence 28 AA;

Query Match 95.8%; Score 136; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 3.9e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNTYTLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 6

AAR34943
 ID AAR34943 standard; peptide; 28 AA.

XX AAR34943;

DT 25-MAR-2003 (revised)

DT 28-JUL-1993 (first entry)

XX Porcine VIP.

XX Vasoactive intestinal peptide; asthma; bronchodilation activity;

us-10-626-719-3.rag

Page 4

Wed Feb 8 17:49:03 2006

XX KW bronchiotracheal constrictive disorders.

XX OS Sus scrofa.

XX PN EP536741-A2.

XX PD 14-APR-1993.

XX PF 08-OCT-1992; 92EP-00117185.

XX PR 11-OCT-1991; 91US-00773747.

XX PA (HOFF) HOFFMANN LA ROCHE & CO AG F.

XX PI Bolin DR, Odonnell M;

XX PD WPI; 1993-118996/15.

XX PF New cyclic vasoactive intestinal peptide (VIP) analogues - are useful for

XX PT the treatment of bronchotracheal constrictive disorders e.g. asthma.

XX PS Disclosure; Page 65; 141pp; English.

XX CC The sequence is that of porcine vasoactive intestinal peptide (VIP) as

XX CC claimed in EP-325044. The peptide sequence was used to design cyclic

XX CC analogues of VIP which have enhanced bronchodilation activity without any

XX CC observable side effects such as cardiovascular side effects. The

XX CC bronchodilation produced by the analogues can be sustained for more than

XX CC two hours. The analogues may be used for the treatment of bronchotracheal

XX CC constrictive disorders, e.g. asthma. See also RR3944-5016. (Updated on 25

XX CC -MAR-2003 to correct PN field.)

XX SQ Sequence 28 AA;

Query Match 95.8%; Score 136; DB 2; Length 28;

Best Local Similarity 96.4%; Pred. No. 3.9e-10;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28

Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 7

AAR40272

ID AAR40272 standard; protein; 28 AA.

XX AC AAR40272;

XX XX 25-MAR-2003 (revised)

DT 09-FEB-1994 (first entry)

XX XX Native VIP.

XX XX Vasoactive intestinal peptide; VIP; bronchodilator; cardiovascular;

XX KW side effect; bronchoconstrictive disorder; asthma.

XX OS Sus scrofa.

XX XX Key Location/Qualifiers

FT Modified-site 28

FT /note= "C-terminal is amidated"

PN US5234907-A.

XX PD 10-AUG-1993.

XX PF 24-APR-1991; 91US-00690300.

XX PR 30-JUN-1989; 89US-00374503.

XX PA (HOFF) HOFFMANN LA ROCHE INC.

XX XX

PI Bolin DR;

XX DR WPI; 1993-264645/33.

XX XX New vasoactive intestinal peptide analogues - are potent bronchodilators

XX PT without cardiovascular side effects, used for treating, e.g. asthma.

XX PS Disclosure; Page 25-26; 66pp; English.

XX XX VIP (AAR40272) was used in the prodn. of analogues (AAR40273-78: generic

XX CC formulae; AAR40279-364: examples). The VIP analogues are potent

XX CC bronchodilators and have no cardiovascular side effects. They are used

XX CC for the treatment of bronchoconstrictive disorders, e.g. asthma. (Updated

XX CC on 25-MAR-2003 to correct PF field.)

XX SQ Sequence 28 AA;

Query Match 95.8%; Score 136; DB 2; Length 28;

Best Local Similarity 96.4%; Pred. No. 3.9e-10;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28

Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 8

AAR53111

ID AAR53111 standard; peptide; 28 AA.

XX AC AAR53111;

XX XX 20-DEC-1994 (first entry)

DT XX Bronchodilator peptide #21.

DE Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;

XX KW selectively; toxicity; mammal; bronchodilator.

XX OS Synthetic.

XX XX Key Location/Qualifiers

FT Misc-difference 10

FT /note= "D-form residue"

FT Misc-difference 22

FT /note= "D-form residue"

FT Modified-site 28

FT /note= "Amidated C-terminal"

XX XX JP06092991-A.

PN XX 05-APR-1994.

XX PD 28-FEB-1991; 91JP-00034335.

XX PF 28-FEB-1991; 91JP-00034335.

XX PR (DAIL) DAICEL CHEM IND LTD.

XX PA (MEIJ) MEIJI SEIKA KAISHA.

XX XX WPI; 1994-147946/18.

XX XX Active peptide(s), having smooth muscle relaxing activity - useful as

XX PT bronchodilators.

XX PS Disclosure; Page 5; 29pp; Japanese.

XX CC The sequences given in AAR53091-111 are synthetic peptides based on

XX CC vasoactive intestinal peptide (VIP) which have the activity of relaxing

XX CC the smooth muscle selectively and are only low toxic-non-toxic to

XX CC mammals. These peptides may be used as bronchodilators. They are prepared

XX CC by solid phase synthesis using a resin having an amino functional group

XX CC capable of bonding to the amino acid at the carboxy terminal through a

CC carboxyl group and fixing the peptide chain during the synthesis
 XX
 SQ Sequence 28 AA;

Query Match 95.8%; Score 136; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 3.9e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
 |||||
 DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 9

AAR53109
 ID AAR53109 standard; peptide; 28 AA.

AC AAR53109;

DT 20-DEC-1994 (first entry)

DE Bronchodilator peptide #19.

KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
 KW selectively; toxicity; mammal; bronchodilator.

OS Synthetic.

FH Key Location/Qualifiers

FT Misc-difference 10 /note= "D-form residue"

FT Modified-site 28 /note= "Amidated C-terminal"

FT WPI; 1994-147946/18.

PN JP06092991-A.

XX 05-APR-1994.

PF 28-FEB-1991; 91JP-00034335.

PR 28-FEB-1991; 91JP-00034335.

XX (DAIL) DAICEL CHEM IND LTD.

PA (MEIJ) MEIJI SEIKA KAISHA.

XX WPI; 1994-147946/18.

XX Active peptide(s), having smooth muscle relaxing activity - useful as

PT bronchodilators.

XX Disclosure; Page 5; 29pp; Japanese.

CC The sequences given in AAR53091-111 are synthetic peptides based on
 CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
 CC the smooth muscle selectively and are only low toxic-non- toxic to
 CC mammals. These peptides may be used as bronchodilators. They are prepared
 CC by solid phase synthesis using a resin having an amino functional group
 CC capable of bonding to the amino acid at the carboxy terminal through a
 CC carboxyl group and fixing the peptide chain during the synthesis

XX Sequence 28 AA;

Query Match 95.8%; Score 136; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 3.9e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
 |||||
 DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 10

AAR53110

ID AAR53110 standard; peptide; 28 AA.

XX AAR53110;

DT 20-DEC-1994 (first entry)

XX Bronchodilator peptide #20.

DE Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
 KW selectively; toxicity; mammal; bronchodilator.

XX Synthetic.

XX Key Location/Qualifiers

FH Misc-difference 22 /note= "D-form residue"

FT Modified-site 28 /note= "Amidated C-terminal"

FT WPI; 1994-147946/18.

PN JP06092991-A.

XX 05-APR-1994.

PF 28-FEB-1991; 91JP-00034335.

PR 28-FEB-1991; 91JP-00034335.

XX (DAIL) DAICEL CHEM IND LTD.

PA (MEIJ) MEIJI SEIKA KAISHA.

XX WPI; 1994-147946/18.

XX Active peptide(s), having smooth muscle relaxing activity - useful as

PT bronchodilators.

XX Disclosure; Page 5; 29pp; Japanese.

CC The sequences given in AAR53091-111 are synthetic peptides based on
 CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
 CC the smooth muscle selectively and are only low toxic-non- toxic to
 CC mammals. These peptides may be used as bronchodilators. They are prepared
 CC by solid phase synthesis using a resin having an amino functional group
 CC capable of bonding to the amino acid at the carboxy terminal through a
 CC carboxyl group and fixing the peptide chain during the synthesis

XX Sequence 28 AA;

Query Match 95.8%; Score 136; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 3.9e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
 |||||
 DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 11

AAR87092
 ID AAR87092 standard; peptide; 28 AA.

XX AAR87092;

DT 06-JUN-1996 (first entry)

XX Vasoactive intestinal peptide, forms part of gene transfer complex.

KW Porcine; VIP; cell surface receptor; ligand; gene transfer; transfection;
 KW gene therapy; vaccine.

XX Sus scrofa.

XX Key Location/Qualifiers

FH Modified-site 28

```

FT XX FR2719316-A1. /note= "amidated"
PN XX
XX XX
PD 03-NOV-1995.
XX XX
PF 28-APR-1994; 94FR-000051174.
XX XX
PR 28-APR-1994; 94FR-000051174.
XX XX
PA (IDMI-) IDM IMMUNO-DESIGNED MOLECULES.
PI Midoux P, Erbacher P, Roche-Degremont A, Monsigny M;
XX WPI; 1995-375617/49.
XX
XX New nucleic acid complexes with cationic polymers - useful for genetic
PT transformation of cells.
XX
XX Claim 11; Page 43; 58pp; French.
XX
XX In novel complexes of negatively-charged nucleic acids and positively-
CC charged polymers, the polymers comprise monomer subunits bearing NH3+
CC groups, at least 10% of which are replaced by uncharged amino groups
CC bearing a substit. that has at least one -OH group and is not recognised
CC by cell membrane receptors; the side-chain groups of the polymer (i.e.
CC the NH3+ and/or OH groups) may be substd. by a group that is recognised
CC by a cell membrane receptor, provided that at least 30% of the NH3+
CC groups remain free. The complexes are useful for transfecting particular
CC nucleic acid sequences into particular cell types, depending on the
CC identity of the cell membrane receptor ligands involved, e.g. for gene
CC therapy or prepn. of vaccines. Preferred ligands are oligoglycoside
CC antigens recognised by lectins, natural metabolites (such as biotin,
CC tetrahydrofolate, folic acid or carnitine) or peptides (pref. vasoactive
CC intestinal peptide, atrial natriuretic peptide, lipocortin, bradykinin,
CC peptide hormones such as alpha-MSH, chemotactic factors and integrin
CC ligands)
XX
XX Sequence 28 AA;
SQ
Query Match 95.8%; Score 136; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.9e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNTYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 12
AAR83785
ID AAR83785 standard; peptide; 28 AA.
AC AAR83785;
XX
XX 27-FEB-1996 (first entry)
DT VIP.
DE
XX VIP; vasoactive intestinal polypeptide; peptide hormone; glucagon;
XX secretin; nervous system; digestive system; smooth muscle; relaxant;
XX bronchial asthma; impotence; therapy.
XX
XX Sus scrofa.
OS
XX
XX Key Location/Qualifiers
XX Misc-difference 29
FT /note= "amidated"
XX
XX EP663406-A1.
PN
XX 19-JUL-1995.
PD
XX

19-DEC-1994; 94EP-00120126.
XX
XX 20-DEC-1993; 93JP-00319815.
XX
XX (SANW ) SANWA KAGAKU KENKYUSHO CO.
XX
XX Noda H, Yamakawa H, Yoshina S, Ishida T, Tomiya N;
XX WPI; 1995-247502/33.
XX
XX New modified form of vasoactive intestinal polypeptide - with C-terminal
PT substd. amide residue, has greater in vivo stability and persistence,
PT useful for treating asthma and impotence.
XX
XX Disclosure; Page 3; 16pp; English.
XX
XX This sequence represents vasoactive intestinal polypeptide (VIP). VIP is
CC a peptide hormone that shows smooth muscle relaxant activity. The
CC structure of VIP is similar to that of the other peptides in the glucagon
CC -secretin family, to which it belongs. VIP is present in the nervous
CC system and the digestive system tracts. It is also found in the lungs of
CC normal patients (however, it is not found in the lungs of people
CC suffering from bronchial asthma). The sequences shown in AAR83784 and
CC AAR83786 are analogues of this sequence. These analogues are found to be
CC resistant to protease digestion. The analogues can be used to treat
CC asthma (by inhalation) and impotence (percutaneously). Compared to
CC natural VIP, the analogue sequences have better in vivo stability. The
CC analogue sequences are also more persistent than natural VIP and have
CC excellent affinity for biological membranes
XX
XX Sequence 28 AA;
SQ
Query Match 95.8%; Score 136; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.9e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNTYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 13
AAR97810
ID AAR97810 standard; peptide; 28 AA.
XX
XX AAR97810;
XX
XX 22-AUG-1996 (first entry)
DT Vasoactive Intestinal Peptide VIP(1-28), for dermal ulcer treatment.
XX
XX DE
XX DE Vasoactive intestinal peptide; VIP; vasodilation; hyperkinetic; skin;
XX burn; decubitis; diabetes; ulcer; bedsores; pressure sore.
XX
XX Synthetic.
OS
XX
XX Key Location/Qualifiers
XX Modified-site 28
FT /note= "amidated"
XX
XX JF08040926-A.
PN
XX 13-FEB-1996.
PD
XX
XX 03-AUG-1994; 94JP-00182457.
XX
XX 03-AUG-1994; 94JP-00182457.
XX
XX (YAKU-) YAKURIGAKU CHUO KENKYUSHO KK.
XX
XX WPI; 1996-157021/16.
XX
XX Remedy for dermal ulcer - comprises vasoactive intestinal polypeptide as
PT

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PT active component.
PS Claim 1; Page 2; 4pp; Japanese.
XX
XX Vasoactive intestinal peptide and related compounds are known to have
CC strong vasodilatory activity. They have now been found to be effective in
CC the treatment of skin ulcers, esp. decubitus ulcers but also burn ulcers,
CC diabetic ulcers, etc. VIP(1-28) is the preferred peptide for use in the
CC novel skin ulcer remedy
XX
XX Sequence 28 AA;
SQ
    Query Match          95.8%; Score 136; DB 2; Length 28;
    Best Local Similarity 96.4%; Pred. No. 3.9e-10;
    Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| |||||

RESULT 14
ID AAR93023 standard; protein; 28 AA.
XX
AC AAR93023;
XX
DT 09-AUG-1996 (first entry)
XX
DE Human glucagon degrading enzyme - VIP substrate.
XX
KW Glucagon degrading enzyme; catalyst; cleavage; selectin; human; primer;
KW vasoactive intestinal peptide; VIP; pancreatic carcinoma cell line; PCR;
KW amplification; polymerase chain reaction; probe; expression vector;
KW eukaryote; SV40 promoter; COS-7.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Cleavage-site 17..18
FT Modified-site 28
FT /note= "contains C-terminal amide group"
XX
PN JP08023972-A.
XX
PD 30-JAN-1996.
XX
PF 19-JUL-1994; 94JP-00187936.
XX
PR 19-JUL-1994; 94JP-00187936.
XX
PA (SUNR ) SUNTORY LTD.
XX
WPI; 1996-133414/14.
XX
PT New glucagon decomposing enzyme, and DNA encoding it - for specifically
PT cleaving glucagon and vasoactive intestinal peptide, in the prevention
PT and treatment of diseases caused by excess glucagon and VIP.
XX
PS Claim 1; Page 2; 18pp; Japanese.
XX
CC A novel gene encoding a glucagon degrading enzyme (GDE; AAT11575) was
CC isolated from a human pancreatic carcinoma cell line HPC-Yo cDNA library.
CC The enzyme has a mol. wt. 83 kD, a pH optimum of 6.8 and catalyses the
CC cleavage of glucagon, vasoactive intestinal peptide and selectin
CC (AAR93022-4). The gene encoding the enzyme was isolated by screening the
CC library with an anti-GDE peptide antibody, amplifying the inserts with
CC the primers AAT18903-4 and probing the fragments with the probe AAT18905.
CC This screening resulted in the full length clone designated lambda GDE4-
CC 2. The coding region of the clone was subsequently PCR amplified by the
CC primers AAT11576-7 and inserted into the eukaryotic expression vector
CC pKDCR under control of the SV40 promoter for production of the protein in
CC COS-7 cells. The protein is useful in preventing and treating diseases

```

```

CC characterised by an excess of glucagon or vasoactive intestinal peptide
XX
XX Sequence 28 AA;
SQ
    Query Match          95.8%; Score 136; DB 2; Length 28;
    Best Local Similarity 96.4%; Pred. No. 3.9e-10;
    Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| |||||

RESULT 15
ID AAW65188 standard; peptide; 28 AA.
XX
AC AAW65188;
XX
DT 02-OCT-1998 (first entry)
XX
DE Vasoactive intestinal peptide (VIP) analogue.
XX
KW Bradykinin; N-benzylglycine; agonist; receptor study; antagonist;
KW achiral; analgesic; luteinising hormone-releasing hormone; LHRH;
KW vasopressin; vasoactive intestinal peptide; VIP.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Modified-site 28
FT /note= "C-terminal amide"
XX
PN US5527882-A.
XX
PD 18-JUN-1996.
XX
PF 07-NOV-1994; 94US-00335202.
XX
PR 07-JUL-1989; 89US-00376839.
PR 16-SEP-1992; 92US-00945664.
XX
PA (REGC ) UNIV CALIFORNIA.
XX
PI Young JD, Mitchell AR;
XX
WPI; 1996-299898/30.
XX
PT New bradykinin analogues contg. N-benzyl-glycine - useful as bradykinin
PT agonists or antagonists, useful e.g. as analgesics.
XX
PS Disclosure; Col 7-8; 15pp; English.
XX
CC The invention relates to the obtaining of a potent agonist or antagonist
CC peptide by the replacement of selected amino acids with synthetic achiral
CC amino acids. The present sequence represents a vasoactive intestinal
CC peptide (VIP) analogue, where at least one of Phe6 and Met17 is intended
CC to be replaced by N-benzylglycine, N-cyclohexylmethylglycine or the ring
CC substituted derivatives thereof
XX
XX Sequence 28 AA;
SQ
    Query Match          95.8%; Score 136; DB 2; Length 28;
    Best Local Similarity 96.4%; Pred. No. 3.9e-10;
    Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
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Job time : 78.875 secs

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us-10-626-719-3.rag

Wed Feb 8 17:49:03 2006

GenCore version 5.1.6
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OM protein - protein search, using sw model

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105.825 Million cell updates/sec

Title: US-10-626-719-3
Perfect score: 142
Sequence: 1 HSDAVFTKNYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
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Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	142	100.0	28	2 US-09-528-200-3	Sequence 3, Appli
2	139	97.9	28	2 US-09-528-200-5	Sequence 5, Appli
3	138	97.2	28	2 US-09-528-200-4	Sequence 4, Appli
4	136	95.8	28	1 US-07-690-300B-1	Sequence 1, Appli
5	136	95.8	28	1 US-07-676-987A-1	Sequence 1, Appli
6	136	95.8	28	1 US-07-868-906-1	Sequence 1, Appli
7	136	95.8	28	1 US-08-201-092-1	Sequence 1, Appli
8	136	95.8	28	1 US-07-924-054-1	Sequence 11, Appli
9	136	95.8	28	1 US-08-243-082-1	Sequence 1, Appli
10	136	95.8	28	1 US-08-361-443-1	Sequence 1, Appli
11	136	95.8	28	1 US-08-288-681A-1	Sequence 1, Appli
12	136	95.8	28	1 US-07-776-272-26	Sequence 26, Appli
13	136	95.8	28	1 US-08-308-729-1	Sequence 1, Appli
14	136	95.8	28	1 US-08-062-472B-40	Sequence 40, Appli
15	136	95.8	28	1 US-08-171-701A-1	Sequence 1, Appli
16	136	95.8	28	1 US-08-741-678-1	Sequence 1, Appli
17	136	95.8	28	1 US-08-519-180-2	Sequence 2, Appli
18	136	95.8	28	1 US-08-414-424-1	Sequence 1, Appli
19	136	95.8	28	1 US-08-413-708B-1	Sequence 1, Appli
20	136	95.8	28	1 US-08-818-253-37	Sequence 37, Appli
21	136	95.8	28	1 US-08-897-624-1	Sequence 1, Appli
22	136	95.8	28	1 US-08-930-845-1	Sequence 1, Appli
23	136	95.8	28	2 US-08-952-568-3	Sequence 3, Appli
24	136	95.8	28	2 US-08-952-568-4	Sequence 4, Appli
25	136	95.8	28	2 US-08-952-568-5	Sequence 5, Appli
26	136	95.8	28	2 US-08-952-568-6	Sequence 6, Appli
27	136	95.8	28	2 US-08-952-568-10	Sequence 10, Appli

28	136	95.8	28	2 US-08-952-568-11	Sequence 11, Appli
29	136	95.8	28	2 US-08-952-568-12	Sequence 12, Appli
30	136	95.8	28	2 US-08-952-568-13	Sequence 13, Appli
31	136	95.8	28	2 US-09-192-048-21	Sequence 21, Appli
32	136	95.8	28	2 US-08-893-749-2	Sequence 2, Appli
33	136	95.8	28	2 US-08-818-252-37	Sequence 37, Appli
34	136	95.8	28	2 US-09-260-846-16	Sequence 16, Appli
35	136	95.8	28	2 US-08-842-322-31	Sequence 31, Appli
36	136	95.8	28	2 US-09-333-842-1	Sequence 1, Appli
37	136	95.8	28	2 US-09-446-352B-1	Sequence 1, Appli
38	136	95.8	28	2 US-09-316-919-53	Sequence 53, Appli
39	136	95.8	28	2 US-09-630-335-1	Sequence 1, Appli
40	136	95.8	28	2 US-09-629-632A-1	Sequence 1, Appli
41	136	95.8	28	2 US-09-528-200-196	Sequence 196, Appli
42	136	95.8	28	2 US-09-316-920A-53	Sequence 53, Appli
43	136	95.8	28	2 US-09-646-046-1	Sequence 1, Appli
44	136	95.8	28	2 US-09-285-422-1	Sequence 1, Appli
45	136	95.8	28	2 US-10-100-256B-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1
US-09-528-200-3
; Sequence 3, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGNER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-3

Query Match 100.0%; Score 142; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 4.5e-13;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTLRKQMAVKYLSILN 28
|||||
Db 1 HSDAVFTKNYTLRKQMAVKYLSILN 28

RESULT 2
US-09-528-200-5
; Sequence 5, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN

```
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 5
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-5

Query Match          97.9%; Score 139; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.2e-12;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-09-528-200-4
; Sequence 4, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 4
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-4

Query Match          97.2%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.6e-12;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28

RESULT 4
US-07-690-300B-1
; Sequence 1, Application US/07690300B
```

```
; Patent No. 5234907
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/690,300B
; FILING DATE: 19910424
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/374,503
; FILING DATE: 30-JUN-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8480
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa
US-07-690-300B-1

Query Match          95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28

RESULT 5
US-07-676-987A-1
; Sequence 1, Application US/07676987A
; Patent No. 5273963
; GENERAL INFORMATION:
; APPLICANT: TERRY W. MOODY
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
; TITLE OF INVENTION: CELL AND NONSMALL CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROTHWELL, FIGG, ERNST & KURZ
; STREET: 555 THIRTEENTH ST. N.W.
; CITY: WASHINGTON
; STATE: D. C.
; COUNTRY: U.S.
; ZIP: 20004
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
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/ SOFTWARE: PatentIn Release #1.0, Version #1.25
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/07/676,987A
/ FILING DATE: 19910329
/ CLASSIFICATION: 514
/ ATTORNEY/AGENT INFORMATION:
/ NAME: REPPER, GEORGE R.
/ REGISTRATION NUMBER: 31,414
/ REFERENCE/DOCKET NUMBER: 1783-101
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: (202) 783-6040
/ TELEFAX: (202) 783-6031
/ INFORMATION FOR SEQ ID NO: 1:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 28 amino acids
/ TYPE: AMINO ACID
/ TOPOLOGY: linear
/ MOLECULE TYPE: peptide
/ US-07-676-987A-1

Query Match 95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNVTRLRKQMAVKKYLNSILN 28

RESULT 6
US-07-868-906-1
; Sequence 1, Application US/07868906
; Patent No. 5376637
; GENERAL INFORMATION:
; APPLICANT: Sawai, Kiichi
; APPLICANT: Kuroono, Masayasu
; APPLICANT: Mitani, Takahiko
; APPLICANT: Sato, Makoto
; APPLICANT: Takahashi, Haruo
; APPLICANT: Ohwaki, Hiroyuki
; TITLE OF INVENTION: PHARMACEUTICAL PREPARATION CONTAINING
; TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE OR ITS ANALOGUE
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Nikaido, Marmelstein, Murray & Oram
; STREET: 1725 K St. N.W. Suite 1000
; CITY: Washington
; STATE: D.C.
; COUNTRY: USA
; ZIP: 20006
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/868,906
; FILING DATE: 19920416
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 3-90671
; FILING DATE: 22-APR-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Oram Jr., George E.
; REGISTRATION/DOCKET NUMBER: 920238N
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 659-2930
; TELEFAX: (202) 887-0357
; TELEX: 440142
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids

QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNVTRLRKQMAVKKYLNSILN 28

RESULT 7
US-08-201-092-1
; Sequence 1, Application US/08201092
; Patent No. 5428015
; GENERAL INFORMATION:
; APPLICANT: KURONO, Masayasu
; APPLICANT: MITANI, Takahiko
; APPLICANT: TAKAHASHI, Haruo
; APPLICANT: SAWAI, Kiichi
; TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: ANALOGUES AND USE THEREOF
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Armstrong, Nikaido, Marmelstein, Kubovcik, &
; ADDRESSEE: Murray
; STREET: 1725 K St. N.W. Suite 1000
; CITY: Washington
; STATE: D. C.
; COUNTRY: U. S. A.
; ZIP: 20006
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/201,092
; FILING DATE: 24-FEB-1994
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 2-165739
; FILING DATE: 26-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 2-408425
; FILING DATE: 27-DEC-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/704,143
; FILING DATE: 22-MAY-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Oram Jr., George E.
; REGISTRATION/DOCKET NUMBER: 27,931
; REFERENCE/DOCKET NUMBER: N910809
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202)-659-2930
; TELEFAX: (202)-887-0357
; TELEX: 440142
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; FRAGMENT TYPE: C-terminal
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Small intestine, proximal
; US-08-201-092-1

Query Match 95.8%; Score 136; DB 1; Length 28;
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1

;; PRIOR APPLICATION DATA:
;; APPLICATION NUMBER: JP Hei. 5-319815
;; FILING DATE: 20-DEC-1993
;; INFORMATION FOR SEQ ID NO: 1:
;; SEQUENCE CHARACTERISTICS:
;; LENGTH: 28 amino acids
;; TYPE: amino acid
;; STRANDEDNESS: single
;; TOPOLOGY: linear
;; MOLECULE TYPE: peptide
US-08-361-443-1

Query Match 95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 11
US-08-288-681A-1
;; Sequence 1, Application US/08288681A
;; Patent No. 5595897
;; GENERAL INFORMATION:
;; APPLICANT: MIDDOUX, PATRICK; ERBACHER,
;; APPLICANT: PATRICK; ROCHE-DEGREMONT, ANNIE-CLAUDE;
;; APPLICANT: MONSIGNY, MICHEL
;; TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC
;; TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
;; TITLE OF INVENTION: PREPARATION AND THEIR USAGE FOR TRANSFECTION
;; TITLE OF INVENTION: OF CELLS
;; NUMBER OF SEQUENCES: 7
;; CORRESPONDENCE ADDRESS:
;; ADDRESSEE: BIERMAN & MUSERLIAN
;; STREET: 600 THIRD AVENUE
;; CITY: NEW YORK
;; STATE: NEW YORK
;; COUNTRY: USA
;; ZIP: 10016

COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/288,681A
FILING DATE: 10-AUG-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR/94/05174
FILING DATE: 28-APR-1994
ATTORNEY/AGENT INFORMATION:
NAME: CHARLES A. MUSERLIAN
REGISTRATION NUMBER: 19,683
REFERENCE/DOCKET NUMBER: 410.005
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 661-8000
TELEFAX: (212) 661-8002
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28
TYPE: Amino Acid
STRANDEDNESS: Unknown
TOPOLOGY: Unknown
MOLECULE TYPE: PEPTIDE

US-08-288-681A-1
Query Match 95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
RESULT 12
US-07-776-272-26
;; Sequence 26, Application US/07776272
;; Patent No. 5612454
;; GENERAL INFORMATION:
;; APPLICANT: Kaminuma, Toshihiko
;; APPLICANT: Taida, Toshi
;; APPLICANT: Tajima, Masahiro
;; TITLE OF INVENTION: Process for Purification of Polypeptide
;; NUMBER OF SEQUENCES: 31
;; CORRESPONDENCE ADDRESS:
;; ADDRESSEE: Wegner, Cantor, Mueller & Player
;; STREET: 1233 20th St. N.W. P.O. Box 18218
;; CITY: Washington
;; STATE: District of Columbia
;; COUNTRY: United States of America
;; ZIP: 20036-8218

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/776,272
FILING DATE: 19911129
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Player, William E
REGISTRATION NUMBER: 31,409
REFERENCE/DOCKET NUMBER: P-450-23167
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-887-0400
TELEFAX: 202-887-0605
TELEX: 440706
INFORMATION FOR SEQ ID NO: 26:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: YES

US-07-776-272-26
Query Match 95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 13
US-08-308-729-1
;; Sequence 1, Application US/08308729
;; Patent No. 5677419
;; GENERAL INFORMATION:
;; APPLICANT: Bolin, David R.
;; TITLE OF INVENTION: Cyclic Vasoactive Peptide
;; TITLE OF INVENTION: Analogs
;; NUMBER OF SEQUENCES: 73
;; CORRESPONDENCE ADDRESS:
;; ADDRESSEE: Hoffmann-La Roche Inc.
;; STREET: 340 Kingeland Street
;; CITY: Nutley
;; STATE: New Jersey
;; COUNTRY: USA
;; ZIP: 07110

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; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/308,729
; FILING DATE:
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/153,530
; FILING DATE:
; APPLICATION NUMBER: US 07/773,747
; FILING DATE: 11-OCT-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8322
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa
; DOCUMENT INFORMATION:
; PUBLICATION NUMBER: EP 325 044 A A
; FILING DATE: 22-DEC-1987
; PUBLICATION DATE: 26-JUL-1989
; RELEVANT RESIDUES IN SEQ ID NO: 1: FROM 18 TO 23
;
US-08-308-729-1
Query Match 95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 14
US-08-062-472B-40
; Sequence 40, Application US/08062472B
; Patent No. 5695954
; GENERAL INFORMATION:
; APPLICANT: Sherwood, Nancy G M
; APPLICANT: Parker, David B
; APPLICANT: McRory, John E
; APPLICANT: Lescheid, David W
; TITLE OF INVENTION: DNA ENCODING TWO FISH NEUROPEPTIDES
; NUMBER OF SEQUENCES: 49
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: KLARQUIST, LLP
; STREET: ONE WORLD TRADE CENTER, SUITE 1600, 121 S.W.
; CITY: PORTLAND
; STATE: OREGON
; COUNTRY: USA
; ZIP: 97204-2988
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/062,472B
; FILING DATE: 14-MAY-1993
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: POLLEY, RICHARD J
; REGISTRATION NUMBER: 28107
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (503) 226-7391
; TELEFAX: (503) 228-9446
; INFORMATION FOR SEQ ID NO: 40:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; US-08-062-472B-40
Query Match 95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 15
US-08-171-701A-1
; Sequence 1, Application US/08171701A
; Patent No. 5721211
; GENERAL INFORMATION:
; APPLICANT:
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
; TITLE OF INVENTION: TREATING SMALL CELL AND NONSMALL
; TITLE OF INVENTION: CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 3
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3.5" Floppy Disk
; COMPUTER: IBM PC Compatible
; OPERATING SYSTEM: MS-DOS
; SOFTWARE: WordPerfect, Version 5.1 Plus
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/171,701A
; FILING DATE: December 22, 1993
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 Amino Acids
; TYPE: Amino Acid
; TOPOLOGY: Linear
; MOLECULE TYPE: Peptide
; FRAGMENT TYPE: N-terminal
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 1
; OTHER INFORMATION:
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 28
; OTHER INFORMATION:
; US-08-171-701A-1
Query Match 95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

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Job time : 21.875 secs
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Copyright (c) 1993 - 2006 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:48 ; Search time 53.625 Seconds
(without alignments)
218.167 Million cell updates/sec

Title: US-10-626-719-3
Perfect score: 142
Sequence: 1 HSDAVFTKNYTLRKQMAVKYLSILN 28
Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA_Main:*
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4: /cgn2_6/prodata1/pubpaa/US10A_PUBCOMB.pep:*
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Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	138	97.2	28	US-09-929-818-190	Sequence 190, App
2	137	96.5	28	US-09-929-818-188	Sequence 188, App
3	137	96.5	28	US-09-929-818-189	Sequence 189, App
4	136	95.8	28	US-09-929-818-1	Sequence 1, Appli
5	136	95.8	28	US-09-929-818-1	Sequence 187, App
6	136	95.8	28	US-09-929-818-187	Sequence 53, Appl
7	136	95.8	28	US-09-999-745-53	Sequence 37, Appl
8	136	95.8	28	US-09-554-000-37	Sequence 1, Appli
9	136	95.8	28	US-10-090-109A-1	Sequence 8, Appli
10	136	95.8	28	US-10-044-722-8	Sequence 17, Appl
11	136	95.8	28	US-10-004-530A-17	Sequence 3, Appli
12	136	95.8	28	US-10-114-716A-3	Sequence 1, Appli
13	136	95.8	28	US-10-211-994-1	Sequence 145, App
14	136	95.8	28	US-10-197-954-145	Sequence 1, Appli
15	136	95.8	28	US-10-100-256B-1	Sequence 1, Appli
16	136	95.8	28	US-10-254-569A-1	Sequence 1, Appli
17	136	95.8	28	US-10-201-288-31	Sequence 31, Appl
18	136	95.8	28	US-10-343-654-22	Sequence 22, Appl
19	136	95.8	28	US-10-416-822-1	Sequence 1, Appli
20	136	95.8	28	US-10-467-059-14	Sequence 14, Appl
21	136	95.8	28	US-10-494-634-7	Sequence 7, Appli
22	136	95.8	28	US-10-718-071-36	Sequence 36, Appl
23	136	95.8	28	US-10-788-563-17	Sequence 17, Appl
24	136	95.8	28	US-10-760-085-145	Sequence 145, App
25	136	95.8	28	US-10-892-981A-1	Sequence 1, Appli
26	136	95.8	28	US-10-769-803-2	Sequence 2, Appli
27	136	95.8	28	US-10-919-325-32	Sequence 32, Appl
28	136	95.8	28	US-10-898-143-1	Sequence 1, Appli

28	136	95.8	28	5	US-10-930-548-3	Sequence 3, Appli
29	136	95.8	28	5	US-10-770-712-56	Sequence 56, Appl
30	136	95.8	28	5	US-10-799-897A-1	Sequence 1, Appli
31	136	95.8	28	6	US-11-066-697-454	Sequence 454, App
32	136	95.8	28	6	US-11-066-697-455	Sequence 455, App
33	136	95.8	29	4	US-10-131-543-11	Sequence 11, Appl
34	136	95.8	29	4	US-10-131-546-11	Sequence 11, Appl
35	136	95.8	29	4	US-10-131-346-11	Sequence 11, Appl
36	136	95.8	29	4	US-10-415-024-11	Sequence 11, Appl
37	136	95.8	29	6	US-11-088-596-11	Sequence 11, Appl
38	136	95.8	29	6	US-11-086-966-11	Sequence 11, Appl
39	136	95.8	30	3	US-09-929-818-203	Sequence 203, App
40	136	95.8	30	3	US-09-929-818-204	Sequence 204, App
41	136	95.8	30	3	US-09-929-818-205	Sequence 205, App
42	136	95.8	31	4	US-10-131-543-9	Sequence 9, Appli
43	136	95.8	31	4	US-10-131-543-10	Sequence 10, Appl
44	136	95.8	31	4	US-10-131-543-16	Sequence 16, Appl
45	136	95.8	31	4	US-10-131-546-9	Sequence 9, Appli

ALIGNMENTS

RESULT 1
US-09-929-818-190
; Sequence 190, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 190
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-190

Query Match 97.2%; Score 138; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.9e-12;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKYLSILN 28
|||||:|||||:|||||:|||||:|||||
Db 1 HSDAVFTQNYTLRKQMAVKYLSILN 28

RESULT 2
US-09-929-818-188
; Sequence 188, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE

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; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 188
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-188

Query Match          96.5%; Score 137; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.6e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTSNYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-09-929-818-189
; Sequence 189, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 189
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-189

Query Match          96.5%; Score 137; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.6e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTSNYTRLRKQMAVKKYLNSILN 28

RESULT 4
US-09-929-818-1
; Sequence 1, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
; OTHER INFORMATION: analog
US-09-929-818-1

Query Match          95.8%; Score 136; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 5
US-09-929-818-187
; Sequence 187, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 187
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-187

Query Match          95.8%; Score 136; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
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Wed Feb 8 17:49:03 2006

us-10-626-719-3.rapbm

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; PRIOR APPLICATION NUMBER: 07/779,039
; PRIOR FILING DATE: 1991-10-18
; PRIOR APPLICATION NUMBER: 07/502,438
; PRIOR FILING DATE: 1990-03-30
; PRIOR APPLICATION NUMBER: 07/397,169
; PRIOR FILING DATE: 1989-08-21
; PRIOR APPLICATION NUMBER: 07/376,555
; PRIOR FILING DATE: 1989-07-07
; PRIOR APPLICATION NUMBER: 07/317,941
; PRIOR FILING DATE: 1989-03-02
; PRIOR APPLICATION NUMBER: 07/282,328
; PRIOR FILING DATE: 1988-12-09
; PRIOR APPLICATION NUMBER: 07/257,998
; PRIOR FILING DATE: 1988-10-14
; PRIOR APPLICATION NUMBER: 07/248,771
; PRIOR FILING DATE: 1988-09-23
; PRIOR APPLICATION data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-004-530A-17
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Query Match          95.8%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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QY 1 HSDAVFTKNYTLRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28
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RESULT 11
US-10-114-716A-3
; Sequence 3, Application US/10114716A
; Publication No. US20030078203A1
; GENERAL INFORMATION:
; APPLICANT: Sudhir Paul
; APPLICANT: Yasuhiro Nishiyama
; TITLE OF INVENTION: Covalently Reactive Transition State
; FILE REFERENCE: UTH001HB
; CURRENT APPLICATION NUMBER: US/10/114,716A
; PRIOR FILING DATE: 2002-04-01
; PRIOR APPLICATION NUMBER: 09/862,849
; PRIOR FILING DATE: 2001-05-22
; PRIOR APPLICATION NUMBER: 09/046,373
; PRIOR FILING DATE: 1998-03-23
; PRIOR APPLICATION NUMBER: 60/280,624
; PRIOR FILING DATE: 2001-03-31
; NUMBER OF SEQ ID NOS: 57
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Vasoactive intestinal peptide
US-10-114-716A-3
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Query Match          95.8%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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QY 1 HSDAVFTKNYTLRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28
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RESULT 12
US-10-211-994-1
; Sequence 1, Application US/10211994
; Publication No. US20030082201A1
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; GENERAL INFORMATION:
; APPLICANT: Rao, M.R.S. Paromita
; APPLICANT: Sengupta, Prasad, Sudhanand
; APPLICANT: Burman, Arand C.
; APPLICANT: Mukherjee, Rama
; APPLICANT: Thomas, Becky
; TITLE OF INVENTION: MULTIVALENT SYNTHETIC VACCINE FOR CANCER
; FILE REFERENCE: U014152-1
; CURRENT APPLICATION NUMBER: US/10/211,994
; PRIOR FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: 60/309,975
; PRIOR FILING DATE: 2001-08-03
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-211-994-1
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Query Match          95.8%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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QY 1 HSDAVFTKNYTLRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28
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RESULT 13
US-10-197-954-145
; Sequence 145, Application US/10197954
; Publication No. US20030119021A1
; GENERAL INFORMATION:
; APPLICANT: K'ster, Hubert
; APPLICANT: Siddiqi, Suhaib
; APPLICANT: Little, Daniel
; TITLE OF INVENTION: Capture Compounds, Collections Thereof
; TITLE OF INVENTION: And Methods For Analyzing The Proteome And Complex
; TITLE OF INVENTION: Compositions
; FILE REFERENCE: 24743-2305
; CURRENT APPLICATION NUMBER: US/10/197,954
; CURRENT FILING DATE: 2002-07-16
; PRIOR APPLICATION NUMBER: 60/306,019
; PRIOR FILING DATE: 2001-07-16
; PRIOR APPLICATION NUMBER: 60/314,123
; PRIOR FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 60/363,433
; PRIOR FILING DATE: 2002-03-11
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 145
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-197-954-145
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Query Match          95.8%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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QY 1 HSDAVFTKNYTLRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28
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RESULT 14
US-10-100-256B-1
; Sequence 1, Application US/10100256B
; Publication No. US20030152511A1
; GENERAL INFORMATION:
; APPLICANT: Thakur, Madhukar
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; TITLE OF INVENTION: RADIOLABELED VASOACTIVE INTESTINAL
; FILE REFERENCE: 8321-104-D11
; CURRENT APPLICATION NUMBER: US/10/100,256B
; CURRENT FILING DATE: 2002-03-15
; PRIOR APPLICATION NUMBER: US 09/333,842
; PRIOR FILING DATE: 1999-06-15
; PRIOR APPLICATION NUMBER: US 60/089,364
; PRIOR FILING DATE: 1998-06-15
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-100-256B-1

Query Match 95.8%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 15
US-10-254-569A-1
; Sequence 1, Application US/10254569A
; Publication No. US20030158110A1
; GENERAL INFORMATION:
; APPLICANT: BURMAN C, ANAND
; APPLICANT: PRASAD, SUDHANAND
; APPLICANT: MUKHERJEE, RAMA
; APPLICANT: SINGH T, ANU
; APPLICANT: MATHUR, ARCHNA
; APPLICANT: GUPTA, NEENA
; TITLE OF INVENTION: VASOACTIVE INTESTINAL PEPTIDES ANALOGS
; FILE REFERENCE: 014071-1
; CURRENT APPLICATION NUMBER: US/10/254,569A
; CURRENT FILING DATE: 2002-12-05
; PRIOR APPLICATION NUMBER: 136/DEL/2000
; PRIOR FILING DATE: 2000-02-18
; PRIOR APPLICATION NUMBER: 09/630,335
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-254-569A-1

Query Match 95.8%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:31:03
Job time : 53.625 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 15:08:34 ; Search time 3.5 Seconds
(without alignments)
86.633 Million cell updates/sec

Title: US-10-626-719-3

Perfect score: 142

Sequence: 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28

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Gapop 10.0 , Gapext 0.5

Searched: 75621 seqs, 10829074 residues

Total number of hits satisfying chosen parameters: 75621

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications_AA_New.*
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2: /cgn2_6/prodata/2/pubpaa/US06_NEW_PUB.pap.*
3: /cgn2_6/prodata/2/pubpaa/US07_NEW_PUB.pap.*
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5: /cgn2_6/prodata/2/pubpaa/US09_NEW_PUB.pap.*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	136	95.8	28	7	US-11-175-690-352
2	136	95.8	28	7	US-11-175-690-353
3	136	95.8	637	7	US-11-175-690-265
4	136	95.8	637	7	US-11-175-690-266
5	100	70.4	636	7	US-11-175-690-240
6	99	69.7	27	7	US-11-175-690-326
7	99	69.7	27	7	US-11-175-690-327
8	99	69.7	38	7	US-11-175-690-328
9	99	69.7	38	7	US-11-175-690-329
10	99	69.7	636	7	US-11-175-690-239
11	99	69.7	647	7	US-11-175-690-241
12	99	69.7	647	7	US-11-175-690-242
13	75	52.8	636	7	US-11-175-690-278
14	74	52.1	27	7	US-11-175-690-364
15	74	52.1	27	7	US-11-175-690-365
16	74	52.1	636	7	US-11-175-690-277
17	65	45.8	30	7	US-11-112-277-30
18	61	43.0	30	7	US-11-112-277-2
19	58	40.8	30	7	US-11-112-277-29
20	58	40.8	49	6	US-10-997-081A-26
21	58	40.8	49	6	US-10-997-081A-27
22	58	40.8	49	6	US-10-997-081A-28
23	58	40.8	49	6	US-10-997-081A-29
24	58	40.8	49	6	US-10-997-081A-30
25	58	40.8	49	6	US-10-997-081A-31

26 40.8 49 6 US-10-997-081A-32 Sequence 32, Appl
27 40.8 49 6 US-10-997-081A-35 Sequence 35, Appl
28 40.8 95 6 US-10-997-081A-25 Sequence 25, Appl
29 40.8 97 6 US-10-997-081A-11 Sequence 11, Appl
30 40.8 97 6 US-10-997-081A-18 Sequence 18, Appl
31 40.8 97 6 US-10-997-081A-19 Sequence 19, Appl
32 40.8 97 6 US-10-997-081A-20 Sequence 20, Appl
33 40.8 97 6 US-10-997-081A-21 Sequence 21, Appl
34 40.8 97 6 US-10-997-081A-22 Sequence 22, Appl
35 40.8 97 6 US-10-997-081A-23 Sequence 23, Appl
36 40.8 97 6 US-10-997-081A-40 Sequence 40, Appl
37 40.8 97 6 US-10-997-081A-41 Sequence 41, Appl
38 40.8 105 6 US-10-997-081A-10 Sequence 10, Appl
39 40.1 30 7 US-11-112-277-31 Sequence 31, Appl
40 35.9 556 7 US-11-124-368A-303 Sequence 303, Appl
41 35.9 636 7 US-11-175-690-268 Sequence 268, Appl
42 35.2 27 7 US-11-175-690-354 Sequence 354, Appl
43 35.2 27 7 US-11-175-690-355 Sequence 355, Appl
44 35.2 636 7 US-11-175-690-267 Sequence 267, Appl
45 32.4 30 7 US-11-174-089-181 Sequence 181, Appl

ALIGNMENTS

RESULT 1
US-11-175-690-352
; Sequence 352, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 352
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-352

Query Match 95.8%; Score 136; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28
Db 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28

RESULT 2

US-11-175-690-353
; Sequence 353, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:

Best Local Similarity 96.4%; Pred. No. 5.8e-13; Mismatches 1; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTKNTYRLRKQMAVKKYLNSILN 28
Db 610 HSDAVFTDNTYRLRKQMAVKKYLNSILN 637
RESULT 4
US-11-175-690-266
; Sequence 266, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 266
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-266
Query Match 95.8%; Score 136; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 5.8e-13; Mismatches 1; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTKNTYRLRKQMAVKKYLNSILN 28
Db 25 HSDAVFTDNTYRLRKQMAVKKYLNSILN 52
RESULT 5
US-11-175-690-240
; Sequence 240, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06

APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 353
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-353
Query Match 95.8%; Score 136; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-14; Mismatches 1; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTKNTYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28
RESULT 3
US-11-175-690-265
; Sequence 265, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265
Query Match 95.8%; Score 136; DB 7; Length 637;

[illegible]

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RESULT 15
US-11-175-690-365
; Sequence 365, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 365
; LENGTH: 27

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:55:03 ; Search time 13.25 Seconds
(without alignments)
203.326 Million cell updates/sec

Title: US-10-626-719-3
Perfect score: 142
Sequence: 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR 80:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	136	95.8	28	B60071	vasoactive intesti
2	136	95.8	28	A60304	vasoactive intesti
3	136	95.8	55	VRBO	vasoactive intesti
4	136	95.8	55	VRRB	vasoactive intesti
5	136	95.8	55	VRSH	vasoactive intesti
6	136	95.8	58	VRPG	vasoactive intesti
7	136	95.8	145	A60038	vasoactive intesti
8	136	95.8	170	VRHU	vasoactive intesti
9	136	95.8	170	VRRT	vasoactive intesti
10	136	95.8	170	A60037	vasoactive intesti
11	123	86.6	55	VRGG	vasoactive intesti
12	121	85.2	165	1 VRCH	vasoactive intesti
13	120	84.5	28	A60303	vasoactive intesti
14	113	79.6	28	A38232	vasoactive intesti
15	110	77.5	25	JQ0361	vasoactive intesti
16	99	69.7	27	A61071	vasoactive intesti
17	99	69.7	38	A49165	pituitary adenylat
18	99	69.7	173	S34767	pituitary adenylat
19	99	69.7	175	A37786	pituitary adenylat
20	99	69.7	176	I84638	pituitary adenylat
21	99	69.7	176	A34044	pituitary adenylat
22	99	69.7	195	I50456	pituitary adenylat
23	93	65.5	38	A61070	pituitary adenylat
24	83	58.5	35	1 HWGHD	extendin-2 - Gila m
25	80	56.3	38	1 HWGHS	extendin-1 - Mexica
26	71	50.0	104	A32731	somatoliberin prec
27	70	49.3	103	2 A41410	somatoliberin prec
28	63	44.4	27	1 SECH	secretin - chicken
29	63	44.4	44	1 RHBOS	somatoliberin - bo

30	58	40.8	44	1 RHPG	somatoliberin - pi
31	58	40.8	108	1 RHHUS	somatoliberin prec
32	57	40.1	443	2 C70392	gamma-glutamyl pho
33	56	39.4	206	2 I51301	proglucagon - chic
34	55.5	39.1	266	2 E71612	ribosomal protein
35	54	38.0	556	2 D88700	protein K02B2.4 [i
36	52	36.6	27	2 A27267	secretin - dog
37	52	36.6	276	2 AD1860	two-component resp
38	51	35.9	418	2 A97300	gamma-glutamyl pho
39	50	35.2	27	1 S07443	secretin - human
40	50	35.2	27	1 SEBO	secretin - bovine
41	50	35.2	27	1 SESH	secretin - sheep
42	50	35.2	131	1 SEPG	secretin precursor
43	50	35.2	168	2 F90095	hypothetical prote
44	50	35.2	194	2 T27608	hypothetical prote
45	50	35.2	194	2 T29172	hypothetical prote

ALIGNMENTS

RESULT 1

B60071
vasoactive intestinal peptide - rhesus macaque
C:Species: Macaca mulatta (rhesus macaque)
C>Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 20-Mar-1998
C:Accession: B60071
R:Yu, J.; Xin, Y.; Eng, J.; Yalow, R.S.
Regul. Pept. 32, 39-45, 1991
A>Title: Rhesus monkey gastroenteropancreatic hormones: relationship to human sequences.
A:Reference number: A60071; MUID:91164506; PMID:2003150
A:Accession: B60071
A>Status: protein sequence not shown
A:Molecule type: protein
A:Residues: 1-28 <YUA>
A:Cross-references: UNIPARC:UPI0000002D1C0
A>Note: the sequence is identical with the human sequence
C:Superfamily: glucagon
C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 95.8%; Score 136; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.7e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 2

A60304
vasoactive intestinal peptide - dog
N:Alternate names: VIP
C:Species: Canis lupus familiaris (dog)
C>Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change 09-Jul-2004
C:Accession: A60304
R:Eng, J.; Pan, Y.C.E.; Raufman, J.P.; Yalow, R.S.
Regul. Pept. Suppl. 3, S14, 1985
A>Title: Purification and sequencing of dog and guinea pig VIP's.
A:Reference number: A60304
A:Accession: A60304
A:Molecule type: protein
A:Residues: 1-28 <ENG>
A:Cross-references: UNIPROT:P04565; UNIPARC:UPI000002D1C0
C:Superfamily: glucagon
C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 95.8%; Score 136; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.7e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||

Wed Feb 8 17:49:04 2006

Db 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 3

VRBO

N/Contains: vasoactive intestinal peptide precursor - bovine (fragments)
 C/Species: Bos primigenius taurus (cattle)
 C/Date: 26-Apr-1996 #sequence revision 03-May-1996 #text_change 07-May-1999
 C/Accession: A61643; A61644; S09689
 R/Carliquet, M.; Kaiser, R.; Tatamoto, K.; Joernvall, H.; Mutt, V.
 Eur. J. Biochem. 144, 243-247, 1984
 A/Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper in
 A/Reference number: A61643; MUID:85027215; PMID:6548446
 A/Accession: A61643
 A/Molecule type: protein
 A/Residues: 1-27 <CAR>
 A/Cross-references: UNIPARC:UPI0000173515
 R/Carliquet, M.; Mutt, V.; Joernvall, H.
 FEBS Lett. 108, 457-460, 1979
 A/Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).
 A/Reference number: A61644; MUID:80092152; PMID:520589
 A/Accession: A61644
 A/Molecule type: protein
 A/Residues: 28-55 <CA2>
 A/Cross-references: UNIPARC:UPI000002D1C0
 R/Bucail, L.; Cauvin, A.; Gourlet, P.; Gossens, D.; de Neef, P.; Rathe, J.; Robberecht, J.
 Biochim. Biophys. Acta 1038, 355-359, 1990
 A/Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A/Reference number: S09688; MUID:90254163; PMID:2340294
 A/Contents: annotation; comparison of mammalian PHI sequences
 C/Superfamily: Glucagon
 C/Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
 F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
 F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.8%; Score 136; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 7.4e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNTYTLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNTYTLRKQMAVKKYLNSILN 55

RESULT 4

VRBB

N/Contains: vasoactive intestinal peptide precursor - rabbit (fragments)
 C/Species: Oryctolagus cuniculus (domestic rabbit)
 C/Date: 03-Feb-1993 #sequence revision 19-Apr-1996 #text_change 20-Mar-1998
 C/Accession: B60415; A60415
 R/Gossens, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht, J.
 Peptides 11, 123-128, 1990
 A/Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.
 A/Reference number: A60415; MUID:90259845; PMID:2342988
 A/Accession: B60415
 A/Molecule type: protein
 A/Residues: 1-27 <GOS>
 A/Cross-references: UNIPARC:UPI00000351DB
 A/Accession: A60415
 A/Molecule type: protein
 A/Residues: 28-55 <G02>
 A/Cross-references: UNIPARC:UPI00000351DB
 C/Superfamily: glucagon
 C/Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
 F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
 F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.8%; Score 136; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 7.4e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNTYTLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNTYTLRKQMAVKKYLNSILN 55

RESULT 5

VRSH

N/Contains: vasoactive intestinal peptide precursor - sheep (fragments)
 C/Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
 C/Date: 31-Mar-1993 #sequence revision 19-Apr-1996 #text_change 09-Jul-2004
 C/Accession: B60072; A60072; C61063; A43974
 R/Bounjoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.
 Regul. Pept. 32, 169-179, 1991
 A/Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide 1
 A/Reference number: A60072; MUID:91239834; PMID:2034821
 A/Accession: B60072
 A/Molecule type: protein
 A/Residues: 1-27 <BOU>
 A/Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515
 A/Accession: A60072
 A/Molecule type: protein
 A/Residues: 28-55 <BO2>
 A/Cross-references: UNIPARC:UPI000002D1C0
 R/Miyata, A.; Jiang, L.; Stibbs, H.H.; Arimura, A.
 Regul. Pept. 38, 145-154, 1992
 A/Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreacti
 A/Reference number: A61063; MUID:92245116; PMID:1574609
 A/Accession: C61063
 A/Molecule type: protein
 A/Residues: 28-55 <MIY>
 A/Cross-references: UNIPARC:UPI000002D1C0
 A/Experimental source: hypothalamus, intestine
 R/Gafvelin, G.
 Peptides 11, 703-706, 1990
 A/Title: Isolation and primary structure of VIP from sheep brain.
 A/Reference number: A43974; MUID:91045331; PMID:2235680
 A/Accession: A43974
 A/Molecule type: protein
 A/Residues: 28-55 <GAF>
 A/Cross-references: UNIPARC:UPI000002D1C0
 A/Experimental source: brain
 C/Superfamily: glucagon
 C/Keywords: amidated carboxyl end; brain; duplication; hormone; intestine; neuropeptide;
 F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
 F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.8%; Score 136; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 7.4e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNTYTLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNTYTLRKQMAVKKYLNSILN 55

RESULT 6

VRPG

N/Contains: vasoactive intestinal peptide precursor - pig (fragments)
 C/Species: Sus scrofa domestica (domestic pig)
 C/Date: 24-Apr-1994 #sequence revision 05-Jan-1996 #text_change 09-Jul-2004
 C/Accession: A01549; A60300; A01550; J00417; A56754; S09690
 R/Tatamoto, K.; Mutt, V.
 Proc. Natl. Acad. Sci. U.S.A. 78, 6603-6607, 1981
 A/Title: Isolation and characterization of the intestinal peptide porcine PHI (PHI-27),
 A/Reference number: A01549; MUID:82082498; PMID:6947244

A:Accession: A01549
A:Molecule type: protein
A:Residues: 1-27 <TAT>
A:Cross-references: UNIPROT:P01284; UNIPARC:UPI00000351DB
R:Tatemoto, K.

Regul. Pept. 6, 330, 1983
A:Title: PHI - a new brain-gut peptide.

A:Reference number: A60300

A:Accession: A60300

A:Molecule type: protein

A:Residues: 1-27 <TA2>

A:Cross-references: UNIPARC:UPI00000351DB

R:Mutt, V.; Said, S.I.

Eur. J. Biochem. 42, 581-589, 1974

A:Title: Structure of the porcine vasoactive intestinal octacosapeptide. The amino-acid
A:Reference number: A01550; MUID:74167323; PMID:4829446

A:Accession: A01550

A:Molecule type: protein

A:Residues: 28-55 <MUT>

A:Cross-references: UNIPARC:UPI000002D1C0

R:Gafvelin, G.; Andersson, M.; Dimoline, R.; Joernvall, H.; Mutt, V.

Peptides 9, 469-474, 1988

A:Title: Isolation and characterization of a variant form of vasoactive intestinal poly
A:Reference number: JT0417; MUID:88335763; PMID:2843830

A:Accession: JT0417

A:Molecule type: protein

A:Residues: 28-58 <GAF>

A:Cross-references: UNIPARC:UPI000002B99A

A:Note: this extended form is active in a VIP assay but is probably an incompletely pro
R:Bodanszky, M.; Klausner, Y.S.; Lin, C.Y.; Mutt, V.; Said, S.I.

J. Am. Chem. Soc. 96, 4973-4978, 1974

A:Reference number: A26231; MUID:74308014; PMID:4854585

A:Contents: annotation

A:Note: a 28-residue peptide having the sequence and biological activities (in two assay
R:Ichiki, Y.; Kitamura, K.; Kangawa, K.; Matsuo, H.; Eto, T.

Biochem. Biophys. Res. Commun. 187, 1587-1593, 1992

A:Title: Organ distribution and characterization of porcine peptides (VIP, CGRP and PHI)
A:Reference number: A56754; MUID:93038640; PMID:1329741

A:Accession: A56754

A:Molecule type: protein

A:Residues: 1-24 <ICH>

A:Cross-references: UNIPARC:UPI0000173514

A:Experimental source: duodenum

A:Note: sequence extracted from NCBI backbone (NCBIP:114219)

R:Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht,
Biochim. Biophys. Acta 1038, 355-359, 1990

A:Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A:Reference number: S09688; MUID:90254163; PMID:2340294

A:Contents: annotation

A:Comment: The biological source of vasoactive intestinal peptide is the duodenal mucosa
of myocardial contractility, stimulation of exocrine pancreatic secretion (in a secretin

C:Superfamily: glucagon

C:Keywords: amidated carboxyl end; duplication; neuropeptide

F:1-27/Product: peptide histidine-isoleucine #status experimental <P27>

F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>

F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental

F:55/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gly

Query Match 95.8%; Score 136; DB 1; Length 58;

Best Local Similarity 96.4%; Pred. No. 7.8e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKYLSILN 28

|||||

DB 28 HSDAVFTDNYTLRKQMAVKYLSILN 55

RESULT 7

A60038

vasoactive intestinal peptide precursor - crab-eating macaque (fragment)

C:Species: Macaca fascicularis (crab-eating macaque)

C:Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004

C:Accession: A60038

R:Benson, D.L.; Isackson, P.J.; Jones, E.G.
Brain Res. Mol. Brain Res. 9, 169-174, 1991
A:Title: In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey ar
A:Reference number: A60038; MUID:91203476; PMID:1850073

A:Accession: A60038

A>Status: not compared with conceptual translation

A:Molecule type: mRNA

A:Residues: 1-145 <BEN>

A:Cross-references: UNIPROT:Q7M2Y9; UNIPARC:UPI000017662C

C:Superfamily: glucagon

C:Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodil

Query Match 95.8%; Score 136; DB 2; Length 145;

Best Local Similarity 96.4%; Pred. No. 2e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKYLSILN 28

|||||

DB 100 HSDAVFTDNYTLRKQMAVKYLSILN 127

RESULT 8

VPHU

vasoactive intestinal peptide precursor [validated] - human

N:Alternate names: VIP precursor

N:Contains: peptide histidine-methionine (PHM-27); peptide histidine-valine (PHV-42); vas

C:Species: Homo sapiens (man)

C:Date: 14-Nov-1983 #sequence revision 14-Nov-1983 #text change 09-Jul-2004

C:Accession: A23296; A93313; A60205; A26361; A27419; JH0618; I51955; I56494; I56988; A015

R:Tsukada, T.; Horovitch, S.J.; Montminy, M.R.; Mandel, G.; Goodman, R.H.

DNA 4, 293-300, 1985

A:Title: Structure of the human vasoactive intestinal polypeptide gene.

A:Reference number: A90952; MUID:86004065; PMID:3899557

A:Accession: A23296

A:Molecule type: DNA

A:Residues: 1-170 <TSU>

A:Cross-references: UNIPROT:P01282; UNIPARC:UPI000003B343; GB:M11553; NID:9340243; PIDN:J

A:Note: the authors translated the codon GAA for residue 48 as Gln

R:Ittoh, N.; Obata, K.; Yanaihara, N.; Okamoto, H.

Nature 304, 547-549, 1983

A:Title: Human preprovasoactive intestinal polypeptide contains a novel PHI-27-like pepti

A:Reference number: A93313; MUID:83271523; PMID:6571696

A:Accession: A93313

A:Molecule type: mRNA

A:Residues: 1-170 <ITO>

A:Cross-references: UNIPARC:UPI000003B343; GB:L00157; GB:J00320; NID:9340277; PIDN:AAA612

R:Gozes, I.; Giladi, E.; Shani, Y.

J. Neurochem. 48, 1138-1141, 1987

A:Title: Vasoactive intestinal peptide gene: putative mechanism of information storage at

A:Reference number: A60205; MUID:87140054; PMID:2434617

A:Accession: A60205

A:Molecule type: mRNA

A:Residues: 78-155 <GOZ>

A:Cross-references: UNIPARC:UPI000016B2F8; GB:M31645; GB:M32162; NID:9340250; PIDN:AAA612

A:Note: this abundant mRNA from a human buccal tumor line contains an unspliced intron

R:Linder, S.; Barkhem, T.; Norberg, A.; Persson, H.; Schalling, M.; Hokfelt, T.; Magnusson

Proc. Natl. Acad. Sci. U.S.A. 84, 605-609, 1987

A:Title: Structure and expression of the gene encoding the vasoactive intestinal peptide

A:Reference number: A26361; MUID:87092456; PMID:3025882

A:Accession: A26361

A:Molecule type: DNA

A:Residues: 1-115,'L',117-135,'G',137-170 <LIN>

A:Cross-references: UNIPARC:UPI000016B2FA; GB:M14623; NID:9340271; PIDN:AAA61288.1; PID:9

A:Note: the authors translated the codon TTA for residue 116 as Ser and GGC for residue 1

R:Yiangou, Y.; Di Marzo, V.; Spokes, R.A.; Panico, M.; Morris, H.R.; Bloom, S.R.

J. Biol. Chem. 262, 14010-14013, 1987

A:Title: Isolation, characterization, and pharmacological actions of peptide histidine va

A:Reference number: A27419; MUID:88007645; PMID:3654650

A:Accession: A27419

A:Molecule type: protein

A:Residues: 81-122 <YIA>

A:Cross-references: UNIPARC:UPI00000351DE

R:Kitamura, K.; Kangawa, K.; Kawamoto, M.; Ichiki, Y.; Matsuo, H.; Eto, T.

Biochim. Biophys. Res. Commun. 185, 134-141, 1992
A>Title: Isolation and characterization of peptides which act on rat platelets, from a P
A/Reference number: JH0618; MUID:92287083; PMID:1318039
A/Accession: JH0618
A/Molecule type: protein
A/Residues: 125-152 <KIT>
A/Cross-references: UNIPARC:UPI000002D1C0
A/Experimental source: pheochromocytoma
R.Yanagani, T.; Ohsawa, K.; Nishizawa, M.; Inoue, C.; Gotoh, E.; Yanaihara, N.; Yamamoto
Ann. N. Y. Acad. Sci. 527, 87-102, 1988
A>Title: Complete nucleotide sequence of human vasoactive intestinal peptide/PHM-27 gene
A/Reference number: I51955; MUID:188267775; PMID:2833091
A/Accession: I51955
A/Status: translated from GB/EMBL/DBDJ
A/Molecule type: DNA
A/Residues: 1-170 <RES>
A/Cross-references: UNIPARC:UPI000003B343; GB:M33027; NID:G340253; PIDN:AAA69515.1; PID:
R.Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 47, 1136-1141, 1987
A>Title: Vasoactive intestinal peptide gene: Putative mechanism of information storage a
A/Reference number: I56494
A/Accession: I56494
A/Status: preliminary; translated from GB/EMBL/DBDJ
A/Molecule type: DNA
A/Residues: 78-155 <RE2>
A/Cross-references: UNIPARC:UPI000016B2P8; GB:M32162; NID:G340250; PIDN:AAA61285.1; PID:
R.Bloom, S.R.; Christofides, N.D.; Delamarter, J.; Buell, G.; Kawashima, E.; Polak, J.M.
Lancet 2, 1163-1165, 1983
A>Title: Diarrhea in vipoma patients associated with cosecretion of a second active pep
A/Reference number: I56988; MUID:84066682; PMID:6139527
A/Accession: I56988
A/Status: preliminary; translated from GB/EMBL/DBDJ
A/Molecule type: mRNA
A/Residues: 50-170 <RE3>
A/Cross-references: UNIPARC:UPI000016B2P7; GB:M54930; NID:G340247; PIDN:AAA63268.1; PID:
C/Genetics:
A/Gene: GDB:VIP
A/Cross-references: GDB:I20490; OMIM:192320
A/Map position: 6q26-6q27
A/Introns: 36/2; 77/2; 112/2; 156/2
C/Superfamily: glucagon
C/Keywords: amidated carboxyl end; duplication; glycoprotein; hormone; intestine; neurog
F;1-20/Domain: signal sequence #status predicted <SIG>
F;81-122/Product: peptide histidine-valine (PHV-42) #status experimental <PHV>
F;81-107/Product: peptide histidine-methionine (PHM-27) #status experimental <PHM>
F;125-152/Product: vasoactive intestinal peptide #status experimental <VIP>
F;68,133/Binding site: carboxylate (Asn) (covalent) #status predicted
F;107/Modified site: amidated carboxyl end (Met) (amide in mature form from following gl
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 95.8%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTKNTYRLRQKQNAVKYKLSILN 28
Db 125 HSDAVFTDNTYRLRQKQNAVKYKLSILN 152
RESULT 9
VRRF
vasoactive intestinal peptide precursor - rat
N/Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C/Species: Rattus norvegicus (Norway rat)
C/Date: 28-Feb-1986 #sequence revision 30-Jun-1993 #text change 09-Jul-2004
C/Accession: A60053; B60037; A01548; A28102; A60586; A60587; S09691
R.Giladi, E.; Shani, Y.; Gozes, I.
Brain Res. Mol. Brain Res. 7, 261-267, 1990
A>Title: The complete structure of the rat VIP gene.
A/Reference number: A60053; MUID:90244869; PMID:2159586
A/Accession: A60053
A/Molecule type: DNA
A/Residues: 1-170 <GIL>

A/Cross-references: UNIPROT:P01283; UNIPARC:UPI000013884A
A/Note: the authors translated the codon GAG for residue 67 as Gln
R.Lamperti, S.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A/Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A/Reference number: A60037; MUID:91232388; PMID:1851524
A/Accession: B60037
A/Status: not compared with conceptual translation
A/Molecule type: DNA
A/Residues: 78-155 <LAM>
A/Cross-references: UNIPARC:UPI0000173511
R.Nishizawa, M.; Hayakawa, Y.; Yanaihara, N.; Okamoto, H.
PEBS Lett. 183, 55-59, 1985
A>Title: Nucleotide sequence divergence and functional constraint in VIP precursor mRNA
A/Reference number: A01548; MUID:85154612; PMID:3838518
A/Accession: A01548
A/Molecule type: mRNA
A/Residues: 9-170 <NTS>
A/Cross-references: UNIPARC:UPI0000170BA3; GB:X02341; NID:G57481; PIDN:CAA26200.1; PID:G:
A/Experimental source: cerebral cortex
R.Gozetzl, E.J.; Sreedharan, S.P.; Turck, C.W.
J. Biol. Chem. 263, 9083-9086, 1988
A>Title: Structurally distinctive vasoactive intestinal peptides from rat basophilic leu
A/Reference number: A28102; MUID:89243784; PMID:3379062
A/Accession: A28102
A/Molecule type: protein
A/Residues: 134-152 <GOE>
A/Cross-references: UNIPARC:UPI00000351E4
A/Note: the source of this novel short form of VIP was rat basophilic leukemia cells
R.Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Rathe, J.; Robberecht, P.; Christ
Endocrinology 125, 1296-1302, 1989
A>Title: Peptide histidine isoleucinamide (PHI)-(1-27)-Gly as a new major form of PHI in
A/Reference number: A60586; MUID:89338237; PMID:2759027
A/Accession: A60586
A/Molecule type: protein
A/Residues: 81-108 <CAU>
A/Cross-references: UNIPARC:UPI0000173512
R.Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Robberecht, P.; Christophe, J.
Endocrinology 125, 2645-2655, 1989
A>Title: Variable distribution of three molecular forms of peptide histidine isoleucinam
A/Reference number: A60587; MUID:90005222; PMID:2792003
A/Accession: A60587
A/Molecule type: protein
A/Residues: 81-122 <CA2>
A/Cross-references: UNIPARC:UPI0000173513
R.Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, P.
Biochim. Biophys. Acta 1038, 355-359, 1990
A>Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A/Reference number: S09688; MUID:90254163; PMID:2340294
A/Contents: annotation; comparison of mammalian PHI sequences
C/Comment: Two active peptides are released from the VIP precursor by cleavage at paired
C/Genetics:
A/Introns: 36/2; 77/2; 156/2
C/Superfamily: glucagon
C/Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone; i
F;1-21/Domain: signal sequence #status predicted <SIG>
F;81-122/Product: PHI-42 #status experimental <PH42>
F;81-108/Product: PHI-27-Gly #status experimental <PHIG>
F;81-107/Product: peptide histidine-isoleucine (PHI-27) #status predicted <PHI>
F;125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F;107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
F;133/Binding site: carboxylate (Asn) (covalent) #status predicted
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 95.8%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTKNTYRLRQKQNAVKYKLSILN 28
Db 125 HSDAVFTDNTYRLRQKQNAVKYKLSILN 152

RESULT 10
A60037
N;Contains: vasoactive intestinal peptide precursor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C;Accession: A60037; I49386
R;Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A;Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A;Reference number: A60037; MUID:91232388; PMID:1851524
A;Accession: A60037
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 1-170 <LAM>
A;Cross-references: UNIPROT:P32648; UNIPARC:UPI000002171F
R;Sena, M.; Bravo, D.T.; Von Agoston, D.; Waschek, J.A.
DNA Seq. 5, 25-29, 1994
A;Title: High conservation of upstream regulatory sequences on the human and mouse vasoactive intestinal peptide precursor
A;Reference number: I49386; MUID:95201289; PMID:7894056
A;Accession: I49386
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 1-35 <RES>
A;Cross-references: UNIPARC:UPI000016D189; EMBL:X74297; PIDN:CAA52350.1; PIDN:CAA52350.1; PIDN:CAA52350.1
C;Comment: Two active peptides are released from the VIP precursor by cleavage at paired basic residues
C;Genetics:
A;Gene: Vip
A;Superfamily: glucagon
C;Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone; F;1-21/Domain: signal sequence #status predicted <SIG>
F;81-107/Product: PHI-27 #status predicted <PHI>
F;125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F;107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following glycosylation)
F;133/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following glycosylation)
Query Match 95.8%; Score 136; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNYTRLRKQMAVKKYLNSILN 152
RESULT 11
VRGP
N;Contains: vasoactive intestinal peptide precursor - guinea pig (fragments)
C;Species: Cavia porcellus (guinea pig)
C;Date: 31-Mar-1988 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
C;Accession: A26175; S09688; A57082; B60304
R;Du, B.H.; Eng, J.; Hulmes, J.D.; Chang, M.; Pan, Y.C.E.; Yalow, R.S.
Biochem. Biophys. Res. Commun. 128, 1093-1098, 1985
A;Title: Guinea pig has a unique mammalian VIP.
A;Reference number: A26175; MUID:85225523; PMID:4004849
A;Accession: A26175
A;Molecule type: protein
A;Residues: 28-55 <DUB>
A;Cross-references: UNIPROT:P04566; UNIPARC:UPI00000351E2
R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Robberecht, B.
Biochim. Biophys. Acta 1038, 355-359, 1990
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A;Reference number: S09688; MUID:90254163; PMID:2340294
A;Accession: S09688
A;Molecule type: protein
A;Residues: 1-27 <BUS>
A;Cross-references: UNIPARC:UPI0000173516
A;Accession: A57082
A;Molecule type: protein
A;Residues: 28-55 <BU2>
A;Cross-references: UNIPARC:UPI0000173516

C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodilator
F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental
Query Match 86.6%; Score 123; DB 1; Length 55;
Best Local Similarity 82.1%; Pred. No. 5.7e-11;
Matches 23; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
DB 28 HSDALFTDTYTRLRKQMAVKKYLNSVLN 55
RESULT 12
VRCH
N;Contains: vasoactive intestinal peptide precursor - chicken
C;Species: Gallus gallus (chicken)
C;Date: 24-Apr-1984 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C;Accession: S47470; A91425; A90720; A01551
R;Talbot, R.T.; Dunn, I.C.; Wilson, P.W.; Sang, H.M.; Sharp, P.J.
Submitted to the EMBL Data Library, August 1984
A;Description: Evidence for alternative splicing of the chicken VIP gene.
A;Reference number: S47470
A;Accession: S47470
A;Molecule type: mRNA
A;Residues: 1-165 <TAL>
A;Cross-references: UNIPROT:P48143; UNIPARC:UPI000002B6C3; EMBL:X80906; NID:g531364; PIDN:FEBS Lett. 60, 322-326, 1975
A;Title: Structure of the vasoactive intestinal octacosapeptide from chicken intestine.
A;Reference number: A91425; MUID:76210823; PMID:1227973
A;Accession: A91425
A;Molecule type: protein
A;Residues: 94-121 <NIL>
A;Cross-references: UNIPARC:UPI00000351E1
R;Bodanszky, M.; Lin, C.Y.; Yiotakis, A.E.; Mutt, V.; Said, S.I.
Bioorg. Chem. 5, 339-350, 1976
A;Title: Vasoactive intestinal peptide (VIP) from chicken. Synthesis and properties of the peptide
A;Reference number: A90720
A;Contents: synthesis
A;Accession: A90720
A;Molecule type: protein
A;Residues: 107-121 <BOD>
A;Cross-references: UNIPARC:UPI0000173517
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; neuropeptide
F;1-25/Domain: signal sequence #status predicted <SIG>
F;94-121/Product: vasoactive intestinal peptide #status experimental <MAT>
F;121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following glycosylation)
Query Match 85.2%; Score 121; DB 1; Length 165;
Best Local Similarity 85.2%; Pred. No. 3.5e-10;
Matches 23; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSIL 27
DB 94 HSDAVFTDNYTRLRKQMAVKKYLNSVL 120
RESULT 13
A60303
N;Contains: vasoactive intestinal peptide - smaller spotted catshark
C;Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish)
C;Date: 10-Nov-1992 #sequence_revision 10-Nov-1992 #text_change 09-Jul-2004
C;Accession: A60303; A60314; S07432
R;Dimoline, R.; Thwaites, D.T.; Young, J.; Lee, C.M.; Thorndyke, M.C.
Regul. Pept. 18, 356, 1987
A;Title: A novel family of VIP-like peptides from the dogfish Scyliorhinus canicula.
A;Reference number: A60303
A;Accession: A60303

A:Molecule type: protein
A:Residues: 1-28 <DIM>
A:Cross-references: UNIPROT:P09685; UNIPARC:UPI000013884B
A>Note: This reference is an abstract
R:Dimaline, R.; Thorndyke, M.C.; Young, J.
Regul. Pept. 14, 1-10, 1986
A:Title: Isolation and partial sequence of elasmobranch VIP.
A:Reference number: A60314; MUID:86234323; PMID:3715063
A:Accession: A60314
A:Molecule type: protein
A:Residues: 1-10 <DI2>
A:Cross-references: UNIPARC:UPI000017662D
R:Dimaline, R.; Young, J.; Thwaites, D.T.; Lee, C.M.; Thorndyke, M.C.
Ann. N. Y. Acad. Sci. 527, 621-623, 1988
A:Title: Amino acid sequence of a biologically active vasoactive intestinal peptide from
A:Reference number: S07432
A:Accession: S07432
A>Status: preliminary
A:Molecule type: protein
A:Residues: 1-28 <DI3>
A:Cross-references: UNIPARC:UPI000013884B
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; intestine; neuropeptide
F;28/Modified site: amidated carboxyl end (Ala) #status experimental

Query Match 84.5%; Score 120; DB 2; Length 28;
Best Local Similarity 81.5%; Pred. No. 7.6e-11;
Matches 22; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSIL 27
||||| :|:|||||:|:|
Db 1 HSDAVFTDYSIRKQMAVKKYLNSLL 27

RESULT 14
A38232
vasoactive intestinal peptide - North American opossum
N:Alternate names: VIP
C:Species: Didelphis virginiana, Didelphis marsupialis virginiana (North American opossum)
C:Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004
C:Accession: A38232
R:Eng, J.; Yu, J.; Rattan, S.; Yalow, R.S.
Proc. Natl. Acad. Sci. U.S.A. 89, 1809-1811, 1992
A:Title: Isolation and amino acid sequences of opossum vasoactive intestinal polypeptide
A:Reference number: A38232; MUID:9219271; PMID:11542675
A:Accession: A38232
A>Status: preliminary
A:Molecule type: protein
A:Residues: 1-28 <ENG>
A:Cross-references: UNIPROT:P39089; UNIPARC:UPI0000138846
A>Note: sequence extracted from NCBI backbone (NCBIP:87215)
C:Superfamily: glucagon
C:Keywords: duplication; intestine; neuropeptide

Query Match 79.6%; Score 113; DB 2; Length 28;
Best Local Similarity 78.6%; Pred. No. 7.9e-10;
Matches 22; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
||||| :|:|||||:|:|
Db 1 HSDAVFTDYSIRKQMAVKKYLNSLLN 28

RESULT 15
JQ0361
vasoactive intestinal peptide - Atlantic cod (fragment)
C:Species: Gadus morhua (Atlantic cod)
C:Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 09-Jul-2004
C:Accession: JQ0361
R:Thwaites, D.I.; Young, J.; Thorndyke, M.C.; Dimaline, R.
Regul. Pept. 21, 436, 1988
A:Title: Isolation and characterisation of two teleost VIP's.
A:Reference number: JQ0361

A:Accession: JQ0361
A:Molecule type: protein
A:Residues: 1-25 <THW>
A:Cross-references: UNIPROT:P09684; UNIPARC:UPI0000138847
C:Superfamily: glucagon
C:Keywords: duplication; intestine; neuropeptide

Query Match 77.5%; Score 110; DB 2; Length 25;
Best Local Similarity 84.0%; Pred. No. 1.9e-09;
Matches 21; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNS 25
||||| :|:|||||:|:|
Db 1 HSDAVFTDYSIRKQMAVKKYLNS 25

Search completed: January 25, 2006, 15:20:37
Job time : 14.25 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:54:02 ; Search time 76 Seconds
(without alignments)
259.931 Million cell updates/sec

Title: US-10-626-719-3
Perfect score: 142
Sequence: 1 HSDAVFTKNYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Uniprot_05.80.*

1: uniprot_sprot.*

2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	136	95.8	28	1 VIP_CANFA	P63289 canis famil
2	136	95.8	28	1 VIP_CAPHI	P63290 capra hircu
3	136	95.8	28	1 VIP_MACMU	P84488 macaca mula
4	136	95.8	28	1 VIP_SHEEP	P63291 ovis aries
5	136	95.8	72	1 VIP_PIG	P01284 sus scrofa
6	136	95.8	72	1 VIP_RABIT	P32549 oryctolagus
7	136	95.8	118	2 QSTCY7 HUMAN	Q5tcy7 homo sapien
8	136	95.8	145	2 Q7MZY9 MACFA	Q7mzy9 macaca fasc
9	136	95.8	153	2 Q7TSR4 9MURI	Q7tsr4 arvicanthus
10	136	95.8	169	2 Q5TCY8 HUMAN	Q5tcy8 homo sapien
11	136	95.8	170	1 VIP_BOVIN	P81401 bos taurus
12	136	95.8	170	1 VIP_HUMAN	P01282 homo sapien
13	136	95.8	170	1 VIP_MOUSE	P32648 mus musculu
14	136	95.8	170	1 VIP_RAT	P01283 rattus norv
15	136	95.8	170	2 Q5TCY9 HUMAN	Q5tcy9 homo sapien
16	136	95.8	171	2 Q9D227 MOUSE	Q9d227 mus musculu
17	133	86.6	72	1 VIP_CAVPO	P04566 cavia porce
18	131	85.2	28	1 VIP_ALAMI	P48142 alligator m
19	131	85.2	28	1 VIP_RANRI	P81016 rana ridibu
20	131	85.2	70	2 Q4TXZ3 ANAPL	Q4txz3 anas platyr
21	131	85.2	86	2 Q4TZY9 AVES	Q4tzy9 anser anser
22	131	85.2	200	1 VIP_CHICK	P48143 gallus gall
23	131	85.2	200	1 VIP_MEIGA	P45644 meleagris g
24	131	85.2	202	2 Q7ZTG8 XENLA	Q7ztg8 xenopus lae
25	130	84.5	28	1 VIP_SCYCA	P09685 scyllorhinu
26	130	84.5	28	2 Q9PR19 AMICA	Q9pr19 amia calva
27	120	84.5	147	2 Q4SQN2 TETNG	Q4sqn2 tetraodon n
28	116	81.7	28	2 Q9PRN8 CARAU	Q9prn8 carassius a
29	113	79.6	28	1 VIP_DIDWA	P39089 didelphis m
30	110	77.5	25	1 VIP_GADMO	P09684 gadus morhu
31	103	72.5	38	2 Q75W85_MISAN	Q75w85 misgurnus a

RESULT 1
ID VIP_CANFA STANDARD; PRT; 28 AA.
AC P63289; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DE 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name=VIP;
OS Canis familiaris (Dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;
OC Canis.
OX NCBI_TaxID=9615;
RN [1]
RP PROTEIN SEQUENCE.
RX MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;
RA Eng J., Du B.-H., Kaufman J.-P., Yalow R.S.;
RT "Purification and amino acid sequences of dog, goat and guinea pig
RT VIPs.";
RL Peptides 7 Suppl. 1:17-20(1986).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC PIR; A60304; A60304.
CC HSSP; P18509; IGSA.
CC Ensembl; ENSCAP00000000538; Canis familiaris.
CC InterPro; IPR000532; Glucagon.
CC Pfam; PF00123; Hormone 2; 1.
CC PRINTS; PR00275; GLUCAGON.
CC SMART; SM00070; GLUCA; 1.
CC PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD_RES 28 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF13FB573FP6F3F CRC64;
Query Match 95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTLRKQMAVKYLSILN 28

Db 1 HSDAVFTKNYTLRKQMAVKYLSILN 28

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RT      "Rhesus monkey gastroenteropancreatic hormones: relationship to human
RT      sequences.";
RT      Regul. Pept.: 32:39-45(1991).
CC      -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC      stimulates myocardial contractility, increases glycogenolysis and
CC      relaxes the smooth muscle of trachea, stomach and gall bladder.
CC      -!- SUBCELLULAR LOCATION: Secreted.
CC      -!- SIMILARITY: Belongs to the glucagon family.
CC      -----
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CC      use as long as its content is in no way modified and this statement is not
CC      removed.

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[illegible][illegible]

RESULT 4	VIP_SHEEP	STANDARD;	PRT;	28 AA.
ID	VIP_SHEEP	STANDARD;	PRT;	28 AA.
AC	P63291; P04565;			
DT	13-AUG-1987 (Rel. 05, Created)			
DT	13-AUG-1987 (Rel. 05, Last sequence update)			
DT	13-SEP-2005 (Rel. 48, Last annotation update)			
DE	Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide).			
DE	Name=VIP;			
GN	Ovis aries (Sheep).			
OS	Ovis aries (Sheep).			
OC	Eukaryota; Metazoa;			
OC	Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;			
OC	Bovidae; Caprinae; Ovis.			
OC	NCBI_TaxID=9940;			
OK	[1]			
RN	PROTEIN SEQUENCE.			
RP	TSUSP=Brain;			
RC	MEDLINE=91045331; PubMed=2235680; DOI=10.1016/0196-9781(90)90184-7;			
RX	Gafvelin G.;			
RA	"Isolation and primary structure of VIP from sheep brain."			
RT	Peptides 11:703-706(1990).			
RL				

[2]
RN PROTEIN SEQUENCE.
RP
RC TISSUE=Small intestine;
RX MEDLINE=912339834; PubMed=2034821; DOI=10.1016/0167-0115(91)90044-H;
RA Bounjoua Y., Vandermeers A., Robberecht P., Vandermeers-Piret M.C.,
RA Christophe J.;
RT "Purification and amino acid sequence of vasoactive intestinal
RT peptide, peptide histidine isoleucinamide and secretin from the ovine
RT small intestine."; small intestine.;
RL Regul. Pept. 32:169-179(1991).
[3]
RN
RN PROTEIN SEQUENCE.
RC TISSUE=Hypothalamus, and Intestine;
RX PubMed=1574609; DOI=10.1016/0167-0115(92)90053-W;
RA Miyata A., Jiang L., Sibbs H.H., Arimura A.;
RT "Chemical characterization of vasoactive intestinal polypeptide-like
RT immunoreactivity in ovine hypothalamus and intestine.";

RESULT 2	VIP_CAPI	STANDARD;	PRT;	28 AA.
IID-VIP_CAPI				
AC	P63290; P04565;			
DT	13-AUG-1987 (Rel. 05, Created)			
DT	13-AUG-1987 (Rel. 05, Last sequence update)			
DT	13-SEP-2005 (Rel. 48, Last annotation update)			
DE	Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide).			

GN	Name=VIP;
OS	Capra hircus (Goat).
OS	Chordata; Vertebrata; Euteleostomi;
OC	Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC	Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC	Pecora; Bovidae; Caprinae; Capra.
OC	NCBI_TaxID=9925;
OX	[i]
RN	PROTEIN SEQUENCE.
RP	MEDLINE=86313157; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;
RX	Eng J., Du B.-H., Raufman J.-P., Valow R.S.;
RT	"Purification and amino acid sequences of dog, goat and guinea pig
RT	VIPs.;"
RL	Peptides 7 Suppl. 1:17-20(1986).
CC	-!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC	stimulates myocardial contractility, increases glycogenolysis and
CC	relaxes the smooth muscle of trachea, stomach and gall bladder.
CC	-!- SUBCELLULAR LOCATION: Secreted.
CC	-!- SIMILARITY: Belongs to the glucagon family.

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CC removed.
CC -----
DR HSPSP; P18509; IGEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
DR Annotation; Direct protein sequencing; Glucagon family; Hormone.
KW MOD_RES 28 Asparagine amide.
FT PT SEQUENCE 28 AA; 3327 MW; EF313FB573FF5F3F CRC64;
SQ

Query Match 95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; pred. No. 1.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy	1	HSDAVFTKNYTRLRKQMAVKKYLNSILN	28
Dd	1	HSDAVFTDNVTRLRKQMAVKKYLNSILN	28

RESULT 3	
VIP MACMU	
ID - VIP MACMU	STANDARD; PRT; 28 AA.
AC	P84488;
DT	13-SEP-2005 (Rel. 48, Created)
DT	13-SEP-2005 (Rel. 48, Last sequence update)
DT	13-SEP-2005 (Rel. 48, Last annotation update)
DE	vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide).
GN	Name=VIP;
OS	Macaca mulatta (Rhesus macaque).
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC	Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC	Cercopithecoidea; Cercopithecinae; Macaca.
OX	NCBI_TaxID=9544;
[1]	
RN	PROTEIN SEQUENCE.
RP	MEDLINE=91164506; PubMed=2003150; DOI=10.1016/0167-0115(91)90005-2;
RX	Yu J.-H., Xin Y., Eng J., Yalow R.S.;

RL Regul. Pept. 38:145-154(1992).
 CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: Belongs to the glucagon family.
 CC -----
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 CC -----
 DR PIR; B60072; VRSH.
 DR HSSP; P18509; IGEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone_2; 1.
 DR PRINTS; PR00275; GLUCAGON.
 DR SMART; SM00070; GLUCA; 1.
 DR PROSITE; PS00260; GLUCAGON; 1.
 KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
 FT MOD RES 28 28 Asparagine amide.
 SQ SEQUENCE 28 AA; 3327 MW; EF313PB573PF6F3F CRC64;

 Query Match 95.8%; Score 136; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.3e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

 QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

 RESULT 5
 VIP_PIG STANDARD; PRT; 72 AA.
 AC P01284; Q9TRN0;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 21-JUL-1986 (Rel. 01, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
 DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
 DE (Vasoactive intestinal polypeptide)] (Fragment).
 GN Name:VIP;
 OS Sus scrofa (Pig).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
 OC Sus.
 OX NCBI_TaxID=9823;
 RN [1]
 RP PROTEIN SEQUENCE OF 1-27.
 RX MEDLINE=82082498; PubMed=6947244;
 RA Tatemoto K., Mutt V.;
 RT "Isolation and characterization of the intestinal peptide porcine PHI
 RL (PHI-27), a new member of the glucagon-secretin family.";
 RL Proc. Natl. Acad. Sci. U.S.A. 78:6603-6607(1981).
 RP [2]
 RP PROTEIN SEQUENCE OF 1-24.
 RC TISSUE=Duodenum;
 RX MEDLINE=93038640; PubMed=1329741;
 RA Ichiki Y., Kitamura K., Kangawa K., Kawamoto M., Matsuo H., Eto T.;
 RT "Organ distribution and characterization of porcine peptides (VIP,
 RL CGRP and PHI) that increase cAMP in rat platelets";
 RL Biochem. Biophys. Res. Commun. 187:1587-1593(1992).
 RN [3]
 RP PROTEIN SEQUENCE OF 28-58.
 RX MEDLINE=88335763; PubMed=2843830; DOI=10.1016/0196-9781(88)90149-0;
 RA Gafvelin G., Andersson M., Dimaline R., Jorvall H., Mutt V.;
 RT "Isolation and characterization of a variant form of vasoactive
 RL intestinal polypeptide";
 RL Peptides 9:469-474(1988).
 RN [4]
 RP PROTEIN SEQUENCE OF 45-72.

RX MEDLINE=74167323; PubMed=4829446;
 RA Mutt V., Said S.I.;
 RT "Structure of the porcine vasoactive intestinal octacosapeptide. The
 RT amino-acid sequence. Use of kallikrein in its determination.";
 RL Eur. J. Biochem. 42:581-585(1974).
 RN [5]
 RP SYNTHESIS OF VIP.
 RX MEDLINE=74308014; PubMed=4854585;
 RA Bodanszky M., Klausner Y.S., Lin C.Y., Mutt V., Said S.I.;
 RT "Synthesis of the vasoactive intestinal peptide (VIP).";
 RL J. Am. Chem. Soc. 96:4973-4978(1974).
 CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -!- FUNCTION: PHI also causes vasodilation.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
 CC with the human precursor sequence.
 CC -!- SIMILARITY: Belongs to the glucagon family.
 CC -----
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 CC -----
 DR PIR; A01549; VRPG.
 DR HSSP; P18509; IGEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone_2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 KW Amidation; Cleavage on pair of basic residues;
 KW Direct protein sequencing; Glucagon family; Hormone.
 FT PEPTIDE 1 27 Intestinal peptide PHI-27.
 FT PEPTIDE 45 72 Vasoactive intestinal peptide.
 FT MOD RES 27 27 Isoleucine amide.
 FT MOD RES 72 72 Asparagine amide.
 FT NON_TER 1 1
 FT NON_TER 72 72
 SQ SEQUENCE 72 AA; 8198 MW; EF03B1FOE5C1CA3A CRC64;

 Query Match 95.8%; Score 136; DB 1; Length 72;
 Best Local Similarity 96.4%; Pred. No. 3.4e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

 QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
 DB 45 HSDAVFTDNYTLRKQMAVKKYLNSILN 72

 RESULT 6
 VIP_RABIT STANDARD; PRT; 72 AA.
 ID_VIP_RABIT
 AC P32649;
 DT 01-OCT-1993 (Rel. 27, Created)
 DT 01-OCT-1993 (Rel. 27, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
 DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
 DE (Vasoactive intestinal polypeptide)] (Fragment).
 GN Name:VIP;
 OS Oryctolagus cuniculus (Rabbit).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
 OC Oryctolagus.
 OX NCBI_TaxID=9986;
 RN [1]
 RP PROTEIN SEQUENCE.
 RC TISSUE=Small intestine;
 RX MEDLINE=90259845; PubMed=2342988; DOI=10.1016/0196-9781(90)90120-T;
 RA Gossen D., Buecail L., Cauvin A., Gourlet P., de Neef P., Rathe J.,
 RA Robberecht P., Vandermeers-Piret M.C., Vandermeers A., Christophe J.;

RT Amino acid sequence of VIP, PHI and secretin from the rabbit small
 RL intestine.";
 CC Peptides 11:123-128(1990).
 CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycogenolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -!- FUNCTION: PHI also causes vasodilation.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
 CC with the human precursor sequence.
 CC -!- SIMILARITY: Belongs to the glucagon family.
 CC -----
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 CC -----
 CC HSSP; P18509; IGEA.
 CC InterPro; IPR000532; Glucagon.
 CC Pfam; PF00123; Hormone 2; 2.
 CC PRINTS; PR00275; GLUCAGON.
 CC PROSITE; PS00260; GLUCAGON; 2.
 CC Amidation; Cleavage on pair of basic residues;
 CC Direct protein sequencing; Glucagon family; Hormone.
 CC PEPTIDE 1 27
 CC PEPTIDE 45 27 Intestinal peptide PHI-27.
 CC MOD_RES 27 27 Vasoactive intestinal peptide.
 CC MOD_RES 72 72 Isoleucine amide.
 CC MOD_RES 72 72 Asparagine amide.
 CC NON_TER 1 1
 CC NON_TER 72 72
 CC SEQUENCE 72 AA; 8198 MW; EF03BF0E5C1CA3A CRC64;
 CC -----
 CC Query Match 95.8%; Score 136; DB 1; Length 72;
 CC Best Local Similarity 96.4%; Pred. No. 3.4e-12;
 CC Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 CC -----
 CC QY 1 HSDAVFTKNTYRLRKQMAVKKYLNSILN 28
 CC Db 45 HSDAVFTDNTYRLRKQMAVKKYLNSILN 72
 CC -----
 CC RESULT 7
 CC QSTCY7 HUMAN PRELIMINARY; PRT; 118 AA.
 CC ID QSTCY7 HUMAN PRELIMINARY; PRT; 118 AA.
 CC AC QSTCY7;
 CC DT 01-FEB-2005 (TrEMBLrel. 29, Created)
 CC DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
 CC DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
 CC DE Vasoactive intestinal peptide (Fragment).
 CC Name=VIP; ORFNames=RP4-546K19.1-003;
 CC OS Homo sapiens (Human).
 CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
 CC Homo. TaxID=9606;
 CC NCBI_TaxID=9606;
 CC [1]
 CC RP NUCLEOTIDE SEQUENCE.
 CC RA Johnson C.;
 CC RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
 CC DR EMBL; AL133356; CAI21766.1; -; Genomic DNA.
 CC DR GO; GO:0005576; C:extracellular region; IEA.
 CC DR GO; GO:0005179; F:hormone activity; IEA.
 CC DR InterPro; IPR000532; Glucagon.
 CC DR Pfam; PF00123; Hormone 2; 2.
 CC DR PRINTS; PR00275; GLUCAGON.
 CC DR SMART; SM00070; GLUCA; 2.
 CC DR PROSITE; PS00260; GLUCAGON; 2.
 CC NON_TER 1 1
 CC SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;
 CC FT NON_TER 1
 CC Query Match 95.8%; Score 136; DB 2; Length 118;
 CC Best Local Similarity 96.4%; Pred. No. 5.7e-12;
 CC Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTKNTYRLRKQMAVKKYLNSILN 28
 Db 74 HSDAVFTDNTYRLRKQMAVKKYLNSILN 101

 CC RESULT 8
 CC Q7M2Y9 MACFA PRELIMINARY; PRT; 145 AA.
 CC ID Q7M2Y9 MACFA PRELIMINARY; PRT; 145 AA.
 CC AC Q7M2Y9;
 CC DT 01-MAR-2004 (TrEMBLrel. 26, Created)
 CC DT 01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
 CC DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
 CC DE Vasoactive intestinal peptide precursor (Fragment).
 CC Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
 CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 CC Cercopitheidae; Cercopitheciae; Macaca.
 CC NCBI_TaxID=9541;
 CC [1]
 CC RP NUCLEOTIDE SEQUENCE.
 CC RX MEDLINE=91203476; PubMed=1850073; DOI=10.1016/0169-328X(91)90145-N;
 CC Benson D.L., Isackson P.J., Jones E.G.;
 CC RT "In situ hybridization reveals VIP precursor mRNA-containing neurons
 CC in monkey and rat neocortex."
 CC Brain Res. Mol. Brain Res. 9:169-174(1991).
 CC PIR; A60038; A60038.
 CC DR HSSP; P18509; IGEA.
 CC DR GO; GO:0005576; C:extracellular region; IEA.
 CC DR GO; GO:0005179; F:hormone activity; IEA.
 CC DR InterPro; IPR000532; Glucagon.
 CC DR Pfam; PF00123; Hormone 2; 2.
 CC DR PRINTS; PR00275; GLUCAGON.
 CC DR PROSITE; PS00260; GLUCAGON; 2.
 CC NON_TER 1 1
 CC NON_TER 145 145
 CC SEQUENCE 145 AA; 16324 MW; 1ABE5D98D853FE5C CRC64;
 CC Query Match 95.8%; Score 136; DB 2; Length 145;
 CC Best Local Similarity 96.4%; Pred. No. 7.1e-12;
 CC Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 CC -----
 CC QY 1 HSDAVFTKNTYRLRKQMAVKKYLNSILN 28
 CC Db 100 HSDAVFTDNTYRLRKQMAVKKYLNSILN 127
 CC -----
 CC RESULT 9
 CC Q7TSR4 9MURI PRELIMINARY; PRT; 153 AA.
 CC ID Q7TSR4 9MURI PRELIMINARY; PRT; 153 AA.
 CC AC Q7TSR4;
 CC DT 01-OCT-2003 (TrEMBLrel. 25, Created)
 CC DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
 CC DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
 CC DE Vasoactive intestinal polypeptide (Fragment).
 CC OS Arvicanthus ansorgei.
 CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
 CC Muridae; Murinae; Arvicanthis.
 CC NCBI_TaxID=204747;
 CC [1]
 CC RP NUCLEOTIDE SEQUENCE.
 CC RA Dardente H., Menet J.S., Tournier B.B., Challet E., Pevet P.,
 CC RA Masson-Pevet M.;
 CC RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.
 CC DR EMBL; AY225375; AAP15167.1; -; mRNA.
 CC DR HSSP; P18509; IGEA.
 CC DR GO; GO:0005576; C:extracellular region; IEA.
 CC DR GO; GO:0005179; F:hormone activity; IEA.
 CC DR InterPro; IPR000532; Glucagon.
 CC DR Pfam; PF00123; Hormone 2; 2.
 CC DR PRINTS; PR00275; GLUCAGON.


```
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON TER 1
SQ SEQUENCE 153 AA; 17171 MW; 9C15095D6E147A15 CRC64;

Query Match 95.8%; Score 136; DB 2; Length 153;
Best Local Similarity 96.4%; Pred. No. 7.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28
||||| ||||| ||||| ||||| |||||
Db 108 HSDAVFTDNYTRLRKQMAVKYLSILN 135

RESULT 10
QSTCY8 HUMAN
ID QSTCY8 HUMAN PRELIMINARY; PRT; 169 AA.
AC QSTCY8
DT 01-FEB-2005 (TREMBLrel. 29, Created)
DT 01-FEB-2005 (TREMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TREMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-002;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CAI21765.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 169 AA; 19081 MW; F325BDFEF47132C3 CRC64;

Query Match 95.8%; Score 136; DB 2; Length 169;
Best Local Similarity 96.4%; Pred. No. 8.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28
||||| ||||| ||||| ||||| |||||
Db 124 HSDAVFTDNYTRLRKQMAVKYLSILN 151

RESULT 11
VIP_BOVIN
ID VIP_BOVIN STANDARD; PRT; 170 AA.
AC P81401; Q8MI77;
DT 15-DEC-1998 (Rel. 37, Created)
DT 25-OCT-2004 (Rel. 45, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHI-27 (Peptide histidine isoleucinamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE-22092342; PubMed-12097482;
RA Hamelink C., Lee H.-W., Chen Y., Grimaldi M., Eiden L.E.;
RT "Coincident elevation of cAMP and calcium influx by PACAP-27 synergistically regulates vasoactive intestinal polypeptide gene transcription through a novel PKA-independent signaling pathway.";
RL J. Neurosci. 22:5310-5320(2002).
RN [2]
RP PROTEIN SEQUENCE OF 81-107.
RC TISSUE=Duodenum;

RX MEDLINE-85027215; PubMed-6548446;
RA Carlquist M., Kaiser R., Tatemoto K., Joernvall H., Mutt V.;
RT "A novel form of the polypeptide PHI isolated in high yield from bovine upper intestine. Relationships to other peptides of the glucagon-secretin family."
RL Eur. J. Biochem. 144:243-247(1984).
RN [3]
RP PROTEIN SEQUENCE OF 125-152.
RC TISSUE=Intestine;
RX MEDLINE-80092152; PubMed-520589; DOI=10.1016/0014-5793(79)80587-6;
RA Carlquist M., Mutt V., Joernvall H.;
RT "Isolation and characterization of bovine vasoactive intestinal peptide (VIP).";
RL FEBS Lett. 108:457-460(1979).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
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CC -----
DR EMBL; AF503910; AAM28152.1; -; mRNA.
DR HSSP; P18509; IGEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 25
FT PROPEP 26 79
FT PEPTIDE 81 107
FT PROPEP 111 122
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT MOD_RES 152 152
FT SEQUENCE 170 AA; 19165 MW; 9C6A6049AF7BFF81 CRC64;

Query Match 95.8%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28
||||| ||||| ||||| ||||| |||||
Db 125 HSDAVFTDNYTRLRKQMAVKYLSILN 152

RESULT 12
VIP_HUMAN
ID VIP_HUMAN STANDARD; PRT; 170 AA.
AC P01282; Q96QK3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHI-42; intestinal peptide PHM-27 (Peptide histidine methioninamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
```

OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini; Hominidae;
 OC Homo
 OX NCBI_TaxID=9606;
 RN [1]
 RN NUCLEOTIDE SEQUENCE.
 RX MEDLINE=83271523; PubMed=6571696;
 RA Itoh N., Obata K.-I., Yanaiharu N., Okamoto H.;
 RT "Human preprovasoactive intestinal polypeptide contains a novel PHI-
 RT 27-like peptide, PHM-27.";
 RL Nature 304:547-549 (1983).
 RN [2]
 RN NUCLEOTIDE SEQUENCE.
 RX MEDLINE=88267775; PubMed=2839091;
 RA Yamagami T., Ohsawa K., Nishizawa M., Inoue C., Gotoh E.,
 RA Yanaiharu N., Yamamoto H., Okamoto H.;
 RT "Complete nucleotide sequence of human vasoactive intestinal
 RT peptide/PHM-27 gene and its inducible promoter.";
 RL Ann. N. Y. Acad. Sci. 527:87-102 (1988).
 RN [3]
 RN NUCLEOTIDE SEQUENCE.
 RX MEDLINE=86004065; PubMed=3899557;
 RA Tsukada T., Horovitch S.J., Montminy M.R., Mandel G., Goodman R.H.;
 RT "Structure of the human vasoactive intestinal polypeptide gene.";
 RL DNA 4:293-300 (1985).
 RN [4]
 RN NUCLEOTIDE SEQUENCE.
 RX MEDLINE=87092456; PubMed=3025882;
 RA Lindar S., Barkhem T., Norberg A., Persson H., Schalling M.,
 RA Hoekfelt T., Magnusson G.;
 RT "Structure and expression of the gene encoding the vasoactive
 RT intestinal peptide precursor.";
 RL Proc. Natl. Acad. Sci. U.S.A. 84:605-609 (1987).
 RN [5]
 RN NUCLEOTIDE SEQUENCE.
 RX MEDLINE=86016352; PubMed=2995945; DOI=10.1016/0196-9781(85)90016-6;
 RA Delamarier J.F., Buell G.N., Kawashima E., Polak J.M., Bloom S.R.;
 RT "Vasoactive intestinal peptide: expression of the prohormone in
 RT bacterial cells.";
 RL Peptides 6:95-102 (1985).
 RN [6]
 RN NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
 RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
 RA Klautner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
 RA Stapleton M., Soares M.B., Bonaldi M.F., Casavant T.L., Scheetz T.E.,
 RA Brownstein M.J., Udwin T.B., Toshiyuki S., Carninci P., Prange C.,
 RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
 RA Bosak S.A., McSwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
 RA Villalón D.K., Munz D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 RA Fahey J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
 RA Schnerch A., Schein J.E., Jones S.U.M., Marra M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length human
 RT and mouse cDNA sequences.";
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
 RN [7]
 RN NUCLEOTIDE SEQUENCE OF 8-170.
 RX MEDLINE=86313155; PubMed=3748844; DOI=10.1016/0196-9781(86)90156-7;
 RA Gozes I., Bodener M., Shani Y., Fridkin M.;
 RT "Structure and expression of the vasoactive intestinal peptide (VIP)
 RT gene in a human tumor.";
 RL Peptides 7:1-6 (1986).
 RN [8]
 RN NUCLEOTIDE SEQUENCE OF 50-170.
 RX MEDLINE=86313155; PubMed=3748844; DOI=10.1016/0196-9781(86)90156-7;
 RA Gozes I., Bodener M., Shani Y., Fridkin M.;
 RT "Structure and expression of the vasoactive intestinal peptide (VIP)
 RT gene in a human tumor.";
 RL Peptides 7:1-6 (1986).
 RN [9]
 RN NUCLEOTIDE SEQUENCE OF 78-155.
 RX MEDLINE=87140054; PubMed=2434617;
 RA Gozes I., Giladi E., Shani Y.;
 RT "Vasoactive intestinal peptide gene: putative mechanism of information
 RT storage at the RNA level.";
 RL J. Neurochem. 47:1136-1141 (1987).
 RN [10]
 RN PROTEIN SEQUENCE OF 81-122.
 RX MEDLINE=88007645; PubMed=3654650;
 RA Yiangou Y., di Marzo V., Spokes R.A., Panico M., Morris H.R.,
 RA Bloom S.R.;
 RT "Isolation, characterization, and pharmacological actions of peptide
 RT histidine valine 42, a novel prepro-vasoactive intestinal peptide-
 RT derived peptide.";
 RL J. Biol. Chem. 262:14010-14013 (1987).
 RN [11]
 RN PROTEIN SEQUENCE OF 127-152.
 RX MEDLINE=91322343; PubMed=1863695;
 RA Theriault Y., Boulanger Y., St Pierre S.;
 RT "Structural determination of the vasoactive intestinal peptide by two-
 RT dimensional H-NMR spectroscopy.";
 RL Biopolymers 31:459-464 (1991).
 CC [12]
 CC BIOCHEM. BIOPHYS. RES. COMMUN. 185:134-141 (1992).
 RN [12]
 RN STRUCTURE BY NMR OF VIP.
 RX MEDLINE=91322343; PubMed=1863695;
 RA Theriault Y., Boulanger Y., St Pierre S.;
 RT "Structural determination of the vasoactive intestinal peptide by two-
 RT dimensional H-NMR spectroscopy.";
 RL Biopolymers 31:459-464 (1991).
 CC [13]
 CC FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycogenolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC [14]
 CC FUNCTION: PHM and PHV also cause vasodilation.
 CC [15]
 CC SIMILARITY: Belongs to the glucagon family.
 CC [16]
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 CC between the Swiss Institute of Bioinformatics and the EMBL Outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 DR EMBL; L00157; AAA61289.1; -; Genomic_DNA.
 DR EMBL; L00154; AAA61289.1; JOINED; Genomic_DNA.
 DR EMBL; L00155; AAA61289.1; JOINED; Genomic_DNA.
 DR EMBL; L00156; AAA61289.1; JOINED; Genomic_DNA.
 DR EMBL; M33027; AAA69515.1; -; Genomic_DNA.
 DR EMBL; M11553; AAA61284.1; -; Genomic_DNA.
 DR EMBL; M11549; AAA61284.1; JOINED; Genomic_DNA.
 DR EMBL; M11550; AAA61284.1; JOINED; Genomic_DNA.
 DR EMBL; M11551; AAA61284.1; JOINED; Genomic_DNA.
 DR EMBL; M11552; AAA61284.1; JOINED; Genomic_DNA.
 DR EMBL; M14623; AAA61288.1; -; Genomic_DNA.
 DR EMBL; M14619; AAA61288.1; JOINED; Genomic_DNA.
 DR EMBL; M14620; AAA61288.1; JOINED; Genomic_DNA.
 DR EMBL; M14621; AAA61288.1; JOINED; Genomic_DNA.
 DR EMBL; M14622; AAA61288.1; JOINED; Genomic_DNA.
 DR EMBL; M36610; AAA61286.1; -; Genomic_DNA.
 DR EMBL; M36606; AAA61286.1; JOINED; Genomic_DNA.
 DR EMBL; M36607; AAA61286.1; JOINED; Genomic_DNA.
 DR EMBL; M36608; AAA61286.1; JOINED; Genomic_DNA.
 DR EMBL; M36609; AAA61286.1; JOINED; Genomic_DNA.
 DR EMBL; SC009794; AAH09794.1; -; mRNA.
 DR EMBL; M36634; AAA61287.1; -; mRNA.

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DR EMBL; M54930; AAA63268.1; -; mRNA.
DR EMBL; M32162; AAA61285.1; -; Genomic DNA.
DR EMBL; M31645; AAA61285.1; JOINED; Genomic DNA.
DR PIR; A23296; VRHU.
DR HSSP; P18509; IGEA.
DR Ensembl; ENSG00000146469; Homo sapiens.
DR HGNC; HGNC:12693; VIP.
DR H-InvDB; HIX0006306; -.
DR MIM; 192320; -.
DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
DR GO; GO:0007589; P:fluid secretion; TAS.
DR GO; GO:0007186; P:G-protein coupled receptor protein signaling; TAS.
DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
DR Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 20
FT PROPEP 21 79
FT PEPTIDE 81 122
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT MOD_RES 152 152
FT CONFLICT 96 97
FT CONFLICT 113 113
FT CONFLICT 116 116
FT CONFLICT 136 136
FT SEQUENCE 170 AA; 19169 MW; 93EC0177F99508FD CRC64;
Query Match 95.8%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTKNYTLRLKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTLRLKQMAVKKYLNSILN 152
RESULT 13
VIP_MOUSE STANDARD; PRT; 170 AA.
AC P32648;
DT 01-OCT-1993 (Rel. 27, Created)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=Vip;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lampert E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
RT polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 1-36.
RC STRAIN=C57BL/6; TISSUE=Spleen;
RX MEDLINE=95201289; PubMed=7894056;
RA Sena M., Bravo D.T., Agoston D., Waschek J.A.;
"High conservation of upstream regulatory sequences on the human and
mouse vasoactive intestinal peptide (VIP) genes.";
DNA Seq. 5:25-29(1994).
-!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
stimulates myocardial contractility, increases glycogenolysis and
relaxes the smooth muscle of trachea, stomach and gall bladder.
-!- FUNCTION: PHM also causes vasodilation.
-!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: Belongs to the glucagon family.
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use as long as its content is in no way modified and this statement is not
removed.
EMBL; X74297; CAA52350.1; -; Genomic DNA.
PIR; A60037; A60037.
HSSP; P18509; IGEA.
Ensembl; ENSMUSG00000019772; Mus musculus.
MGI; MGI:98933; Vip.
GO; GO:0005615; C:extracellular space; TAS.
InterPro; IPR000532; Glucagon.
Pfam; PF00123; Hormone_2; 2.
PRINTS; PR00275; GLUCAGON.
PROSITE; PS00260; GLUCAGON; 2.
Amidation; Cleavage on pair of basic residues; Glucagon family;
KW Glycoprotein; Hormone; Signal
FT SIGNAL 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT MOD_RES 152 152
FT CARBOHYD 133 133
FT SEQUENCE 170 AA; 19049 MW; 0164C831F8F5C73D CRC64;
Query Match 95.8%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTKNYTLRLKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTLRLKQMAVKKYLNSILN 152
RESULT 14
VIP_RAT STANDARD; PRT; 170 AA.
AC P01283;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=Vip;
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=90244869; PubMed=2159586; DOI=10.1016/0169-328X(90)90036-D;
RA Giladi E., Shani Y., Gozes I.;
RT "The complete structure of the rat VIP gene.";

```

RL Brain Res. Mol. Brain Res. 7:261-267(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 9-170.
RC TISSUE=Brain cortex;
RA MEDLINE=85154612; PubMed=3383518; DOI=10.1016/0014-5793(85)80953-4;
RX Nishizawa M., Hayakawa Y., Yanaiharu N., Okamoto H.;
RT "Nucleotide sequence divergence and functional constraint in VIP
precursor mRNA evolution between human and rat.";
RL FEBS Lett. 183:55-59(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lampert E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [4]
RP PROTEIN SEQUENCE OF 134-152.
RX MEDLINE=88243784; PubMed=3379062;
RA Goetzl E.J., Sreedharan S.P., Turk C.W.;
RT "Structurally distinctive vasoactive intestinal peptides from rat
basophilic leukemia cells.";
RL J. Biol. Chem. 263:9083-9086(1988).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
stimulates myocardial contractility, increases glycogenolysis and
relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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between the Swiss Institute of Bioinformatics and the EMBL outstation -
the European Bioinformatics Institute. There are no restrictions on its
use as long as its content is in no way modified and this statement is not
removed.
CC -----
DR EMBL; X02341; CAA26200.1; -; mRNA.
DR PIR; A60053; VPEP.
DR HSSP; P18509; IGEA.
DR Ensemble; ENSRNOG00000018908; Rattus norvegicus.
DR RGD; 621647; Vip.
DR GO; GO:0042311; P:vasodilation; NAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;
KW Signal.
FT SIGNAL. 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT -----
FT Intestinal peptide PHV-42 (By
similarity).
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT -----
FT Isoleucine amide (G-108 provides amide
group).
FT MOD_RES 152 152
FT -----
FT Asparagine amide (G-153 provides amide
group).
FT CARBOHYD 68 68
FT CARBOHYD 133 133
FT SEQUENCE 170 AA; 19079 MW; 202AE82EBBD190B CRC64;
Query Match 95.8%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNTYTRLRKQMAVKKYLNSILN 152

RESULT 15
Q5TCY9 HUMAN PRELIMINARY; PRT; 170 AA.
AC Q5TCY9;
DT 01-FEB-2005 (TRENBLrel. 29, Created)
DT 01-FEB-2005 (TRENBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TRENBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546KL19.1-001;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CAI21764.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 170 AA; 19168 MW; 93EC0177F89508FD CRC64;
Query Match 95.8%; Score 136; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNTYTRLRKQMAVKKYLNSILN 152
Search completed: January 25, 2006, 15:18:39
JOB time : 76 secs

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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-4

Perfect score: 142

Sequence: 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : A_Geneseq_21.*

1: Geneseqp1980s.*

2: Geneseqp1990s.*

3: Geneseqp2000s.*

4: Geneseqp2001s.*

5: Geneseqp2002s.*

6: Geneseqp2003as.*

7: Geneseqp2003bs.*

8: Geneseqp2004s.*

9: Geneseqp2005s.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	142	100.0	28	5	Abg94141 Human vas
2	137	96.5	28	1	Aap10172 VIP. 3/20
3	137	96.5	28	1	Aap71039 Sequence
4	137	96.5	28	2	Aar34943 Porcine V
5	137	96.5	28	2	Aar40272 Native VI
6	137	96.5	28	2	Aar53111 Bronchodi
7	137	96.5	28	2	Aar53109 Bronchodi
8	137	96.5	28	2	Aar53110 Bronchodi
9	137	96.5	28	2	Aar87092 Vasoactiv
10	137	96.5	28	2	Aar83785 VIP. 2/19
11	137	96.5	28	2	Aar97810 Vasoactiv
12	137	96.5	28	2	Aar93023 Human glu
13	137	96.5	28	2	Aaw65188 Vasoactiv
14	137	96.5	28	2	Aaw06120 Human VIP
15	137	96.5	28	2	Aaw06119 Mouse VIP
16	137	96.5	28	2	Aaw06114 Rabbit VI
17	137	96.5	28	2	Aaw06113 Macaque V
18	137	96.5	28	2	Aaw06121 Pig VIP p
19	137	96.5	28	2	Aaw06122 Goat VIP
20	137	96.5	28	2	Aaw06115 Dog VIP p
21	137	96.5	28	2	Aaw06112 Sheep VIP
22	137	96.5	28	2	Aaw37791 Vasoactiv
23	137	96.5	28	2	Aaw71677 Vasoactiv
24	137	96.5	28	2	Aay30769 Vasoactiv

25	137	96.5	28	2	AAY44196 Human vas
26	137	96.5	28	3	AAY94560 Vasoactiv
27	137	96.5	28	4	AAB85707 Peptide h
28	137	96.5	28	4	AAB85710 Peptide h
29	137	96.5	28	4	AAB91279 Vasoactiv
30	137	96.5	28	4	AAB91278 Vasoactiv
31	137	96.5	28	4	AAB12028 Porcine v
32	137	96.5	28	4	AAB37111 Human vas
33	137	96.5	28	4	AAG70459 Vasoactiv
34	137	96.5	28	4	AAB50845 Human pro
35	137	96.5	28	4	AAB09653 Porcine i
36	137	96.5	28	4	AAB45614 Native va
37	137	96.5	28	5	AAB19604 Human sce
38	137	96.5	28	5	AAB19627 Human vas
39	137	96.5	28	5	AAB19603 Human vas
40	137	96.5	28	5	ABB06677 Mammalian
41	137	96.5	28	5	AAB06677 Modified
42	137	96.5	28	5	AAB06677 Tumour ap
43	137	96.5	28	5	ABG94140 Human vas
44	137	96.5	28	5	ABG94139 Human vas
45	137	96.5	28	5	ABG93952 Human vas

ALIGNMENTS

RESULT 1

ABG94141

ID ABG94141 standard; peptide; 28 AA.

XX AC ABG94141;

XX DT 27-NOV-2002 (first entry)

XX DE Human vasoactive intestinal polypeptide (VIP) analogue #189.

XX KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;

XX KW vaginal atrophy; pain; intercourse; vaginal itching;

XX KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;

XX KW sexual aversion; menopausal state; post-menopausal state; sexual desire;

XX KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;

XX KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;

XX KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.

XX OS Unidentified.

XX PN US2002099003-A1.

XX PD 25-JUL-2002.

XX PF 13-AUG-2001; 2001US-00929818.

XX PR 28-OCT-1997; 97US-00959057.

XX PR 28-OCT-1997; 97US-00959084.

XX PR 27-OCT-1998; 98US-00181316.

XX PR 04-FEB-2000; 2000US-00498522.

XX PA (WILS/) WILSON L F.

XX PA (PLAC/) PLACE V A.

XX PI Wilson LF, Place VA;

XX DR WPI; 2002-697729/75.

XX PT Treating sexual dysfunction in females comprises administering vasoactive

XX PT intestinal polypeptide or against to vagina and/or vulvar region.

XX PS Claim 19; Page; 19pp; English.

XX CC The invention relates to a method for treating sexual dysfunction in

XX CC females comprising administering a formulation comprising a vasoactive

XX CC agent comprising a vasoactive intestinal polypeptide and/or agonist to

XX CC the vagina and/or vulvar region. The method is used for preventing

CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952

XX Sequence 28 AA;
 SQ Query Match 100.0%; Score 142; DB 5; Length 28;
 Best Local Similarity 100.0%; Pred. No. 3.7e-11;
 Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

RESULT 2
 AAP10172
 ID AAP10172 standard; peptide; 28 AA.
 XX AAP10172;
 AC
 XX 25-MAR-2003 (revised)
 DT 21-DEC-1992 (first entry)
 XX
 XX VIP.
 XX Vasoactive intestinal polypeptide;
 KW allergic asthma. chemical mediator isolation-inhibiting action.
 XX Homo sapiens.

XX JP56128721-A.
 XX 08-OCT-1981.
 XX 12-MAR-1980; 80JP-00030308.
 XX 12-MAR-1980; 80JP-00030308.
 XX (BISA) EISAI CO LTD.
 XX WPI; 1981-86052D/47.
 XX Antiallergic agent comprises peptide - contg. 28 amino acid units, is
 PT active against e.g. bronchial asthma and hay fever.
 XX Claim 1; Page 1; 3pp; Japanese.
 XX The sequence given can be used as the active component in an antiallergic
 CC agent. Vasoactive intestinal polypeptide (VIP) has chemical mediator
 CC isolation-inhibiting action and is effective for therapy and prevention
 CC of various allergic diseases, such as allergic rhinitis, bronchial
 CC asthma, allergic asthma, hay fever, urticaria, eczema, atopic dermatitis
 CC etc. Since it also has specific bronchial smooth muscle relaxant action,
 CC it is esp. useful for treating and preventing bronchial and allergic
 CC asthma. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
 CC 2003 to correct PA field.)

XX Sequence 28 AA;
 SQ Query Match 96.5%; Score 137; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.6e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Best Local Similarity 96.4%; Pred. No. 1.6e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

RESULT 3
 AAP71039
 ID AAP71039 standard; peptide; 28 AA.
 XX AAP71039;
 AC
 XX 03-OCT-2002 (revised)
 DT 05-APR-1991 (first entry)
 XX
 XX Sequence of active ingredient in hair growth promoting compen.

XX Vasoactive intestinal tract polypeptide; digestive tract polypeptide;
 KW hair growth promoter.
 XX Synthetic.
 XX EP225639-A.
 XX 16-JUN-1987.
 XX 10-DEC-1986; 86EP-00117190.
 XX 10-DEC-1985; 85JP-00276099.
 XX (MEIJ) MEIJI SEIKA KAISHA.
 XX Yanaihara N, Watanabe S, Kasai M, Sato T, Kikkoji T;
 PI WPI; 1987-164873/24.
 XX Hair growth promoting compen. - contg. vasoactive intestinal polypeptide
 PT and carrier.
 XX Claim 1; Page 8; 10pp; English.
 XX When applied to the skin, the peptide causes a local increase in blood
 CC flow and promotes hair growth. It is the natural peptide known as
 CC vasoactive intestinal polypeptide which has been isolated from the
 CC digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)
 XX Sequence 28 AA;

Query Match 96.5%; Score 137; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.6e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

RESULT 4
 AAR34943
 ID AAR34943 standard; peptide; 28 AA.
 XX AAR34943;
 AC
 XX 25-MAR-2003 (revised)
 DT 28-JUL-1993 (first entry)
 XX Porcine VIP.
 XX Vasoactive intestinal peptide; asthma; bronchodilation activity;
 KW bronchiotracheal constrictive disorders.

```

OS Sus scrofa.
PN EP536741-A2.
XX
PD 14-APR-1993.
XX
PF 08-OCT-1992; 92EP-00117185.
XX
PR 11-OCT-1991; 91US-00773747.
XX
PA (HOFF ) HOFFMANN LA ROCHE & CO AG F.
XX
PI Bolin DR, Odonnell M;
XX
DR WPI; 1993-118996/15.
XX
XX New cyclic vasoactive intestinal peptide (VIP) analogues - are useful for
PT the treatment of bronchotracheal constructive disorders e.g. asthma.
XX
PS Disclosure; Page 65; 141pp; English.
XX
CC The sequence is that of porcine vasoactive intestinal peptide (VIP) as
CC claimed in EP-325044. The peptide sequence was used to design cyclic
CC analogues of VIP which have enhanced bronchodilation activity without any
CC observable side effects such as cardiovascular side effects. The
CC bronchodilation produced by the analogues can be sustained for more than
CC two hours. The analogues may be used for the treatment of bronchotracheal
CC constrictive disorders, e.g. asthma. See also RR3944-5016. (Updated on 25
CC -MAR-2003 to correct PN field.)
XX
XX Sequence 28 AA;
XX
Query Match 96.5%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.6e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
XX
OY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
XX
RESULT 5
AAR40272
ID AAR40272 standard; protein; 28 AA.
XX
AC AAR40272;
XX
DT 25-MAR-2003 (revised)
DT 09-FEB-1994 (first entry)
XX
DE Native VIP.
XX
KW Vasoactive intestinal peptide; VIP; bronchodilator; cardiovascular;
KW side effect; bronchoconstrictive disorder; asthma.
XX
OS Sus scrofa.
XX
XX Key Location/Qualifiers
XX Modified-site 28
XX /note= "C-terminal is amidated"
XX
PN US5234907-A.
XX
PD 10-AUG-1993.
XX
PF 24-APR-1991; 91US-00690300.
XX
PR 30-JUN-1989; 89US-00374503.
XX
PA (HOFF ) HOFFMANN LA ROCHE INC.
XX
PI Bolin DR,
XX
XX
Query Match 96.5%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.6e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
XX
OY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
XX
RESULT 6
AAR53111
ID AAR53111 standard; peptide; 28 AA.
XX
AC AAR53111;
XX
DT 20-DEC-1994 (first entry)
XX
XX Bronchodilator peptide #21.
XX
KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
KW selectively; toxicity; mammal; bronchodilator.
XX
OS Synthetic.
XX
XX Key Location/Qualifiers
XX FT Misc-difference 10 /note= "D-form residue"
XX FT Misc-difference 22 /note= "D-form residue"
XX FT Modified-site 28 /note= "Amidated C-terminal"
XX
PN JP06092991-A.
XX
PD 05-APR-1994.
XX
PF 28-FEB-1991; 91JP-00034335.
XX
PR 28-FEB-1991; 91JP-00034335.
XX
XX (DAIL ) DAICEL CHEM IND LTD.
XX PA (MEIJ ) MEIJI SEIKA KAISHA.
XX
DR WPI; 1994-147946/18.
XX
XX Active peptide(s), having smooth muscle relaxing activity - useful as
XX PT bronchodilators.
XX
PS Disclosure; Page 5; 29pp; Japanese.
XX
CC The sequences given in AAR53091-111 are synthetic peptides based on
CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
CC the smooth muscle selectively and are only low toxic-non- toxic to
CC mammals. These peptides may be used as bronchodilators. They are prepared
CC by solid phase synthesis using a resin having an amino functional group
CC capable of bonding to the amino acid at the carboxy terminal through a
CC carboxyl group and fixing the peptide chain during the synthesis
XX

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SQ Sequence 28 AA;
  Query Match          96.5%; Score 137; DB 2; Length 28;
  Best Local Similarity 96.4%; Pred. No. 1.6e-10;
  Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNTYTLRKQMAVKKYLNSILN 28
    ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 7
AAR53109
ID AAR53109 standard; peptide; 28 AA.
XX
AC AAR53109;
XX
DT 20-DEC-1994 (first entry)
XX
DE Bronchodilator peptide #19.
XX
KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
selectively; toxicity; mammal; bronchodilator.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Misc-difference 22
FT Modified-site 28 /note= "D-form residue"
FT Modified-site 28 /note= "Amidated C-terminal"
XX
PN JP06092991-A.
XX
PD 05-APR-1994.
XX
PF 28-FEB-1991; 91JP-00034335.
XX
PR 28-FEB-1991; 91JP-00034335.
XX
PA (DAIL ) DAICEL CHEM IND LTD.
PA (MEIJ ) MEIJI SEIKA KAISHA.
XX
DR WPI; 1994-147946/18.
XX
PT Active peptide(s), having smooth muscle relaxing activity - useful as
bronchodilators.
XX
PS Disclosure; Page 5; 29pp; Japanese.
XX
CC The sequences given in AAR53091-111 are synthetic peptides based on
vasoactive intestinal peptide (VIP) which have the activity of relaxing
the smooth muscle selectively and are only low toxic-non- toxic to
mammals. These peptides may be used as bronchodilators. They are prepared
by solid phase synthesis using a resin having an amino functional group
capable of bonding to the amino acid at the carboxy terminal through a
carboxyl group and fixing the peptide chain during the synthesis
XX
SQ Sequence 28 AA;
  Query Match          96.5%; Score 137; DB 2; Length 28;
  Best Local Similarity 96.4%; Pred. No. 1.6e-10;
  Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNTYTLRKQMAVKKYLNSILN 28
    ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 9
AAR87092
ID AAR87092 standard; peptide; 28 AA.
XX
AC AAR87092;
XX
DT 06-JUN-1996 (first entry)
XX
DE Vasoactive intestinal peptide, forms part of gene transfer complex.
XX
KW Porcine; VIP; cell surface receptor; ligand; gene transfer; transfection;
gene therapy; vaccine.
XX
OS Sus scrofa.
XX
FH Key Location/Qualifiers
FT Modified-site 28 /note= "amidated"
XX
```


PN	FR2719316-A1.
XX	
PD	03-NOV-1995.
XX	
PY	28-APR-1994; 94FR-00005174.
XX	
PR	28-APR-1994; 94FR-00005174.
XX	
PA	(IDMI-) IDM IMMUNO-DESIGNED MOLECULES.
PI	Midoux P, Erbacher P, Roche-Degremont A, Monsigny M;
XX	
DR	WPI; 1995-375617/49.
XX	
PT	New nucleic acid complexes with cationic polymers - useful for genetic transformation of cells.
PS	Claim 11; Page 43; 58pp; French.
CC	In novel complexes of negatively-charged nucleic acids and positively-charged polymers, the polymers comprise monomer subunits bearing NH3+ groups, at least 10% of which are replaced by uncharged amino groups bearing a substituent that has at least one -OH group and is not recognised by cell membrane receptors; the side-chain groups of the polymer (i.e. the NH3+ and/or OH groups) may be substituted by a group that is recognised by a cell membrane receptor, provided that at least 30% of the NH3+ groups remain free. The complexes are useful for transfecting particular nucleic acid sequences into particular cell types, depending on the identity of the cell membrane receptor ligands involved, e.g. for gene therapy or prepn. of vaccines. Preferred ligands are oligoglycoside antigens recognised by lectins, natural metabolites (such as biotin, tetrahydrofolate, folic acid or carnitine) or peptides (pref. vasoactive intestinal peptide, atrial natriuretic peptide, lipocortin, bradykinin, peptide hormones such as alpha-MSH, chemotactic factors and integrin ligands)
SQ	Sequence 28 AA;
Query Match	96.5%; Score 137; DB 2; Length 28;
Best Local Similarity	96.4%; Pred. No. 1.6e-10;
Matches	27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY	1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Dd	1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
RESULT 10	
AAR83785	
ID	AAR83785 standard; peptide; 28 AA.
AC	AAR83785;
XX	
DT	27-FEB-1996 (first entry)
DE	VIP.
XX	
KW	VIP; vasoactive intestinal polypeptide; peptide hormone; glucagon; secretin; nervous system; digestive system; smooth muscle; relaxant; bronchial asthma; impotence; therapy.
XX	
OS	Sus scrofa.
PH	Key Location/Qualifiers
FT	Misc-difference 29 /note= "amidated"
PP	
PN	EP663406-A1.
XX	
PD	19-JUL-1995.
XX	
PF	19-DEC-1994; 94EP-00120126.
XX	
PN	FR2719316-A1.
XX	
PA	(SANW) SANWA KAGAKU KENKYUSHO CO.
XX	
PI	Noda H, Yamakawa H, Yoshina S, Ishida T, Tomiya N;
XX	
DR	WPI; 1995-247502/33.
XX	
PT	New modified form of vasoactive intestinal polypeptide - with C-terminal substd. amide residue, has greater in vivo stability and persistence, useful for treating asthma and impotence.
PS	Disclosure; Page 3; 16pp; English.
CC	This sequence represents vasoactive intestinal polypeptide (VIP). VIP is a peptide hormone that shows smooth muscle relaxant activity. The structure of VIP is similar to that of the other peptides in the glucagon -secretin family, to which it belongs. VIP is present in the nervous system and the digestive system tracts. It is also found in the lungs of normal patients (however, it is not found in the lungs of people suffering from bronchial asthma). The sequences shown in AAR83784 and CC AAR83786 are analogues of this sequence. These analogues are found to be resistant to protease digestion. The analogues can be used to treat asthma (by inhalation) and impotence (percutaneously). Compared to natural VIP, the analogue sequences have better in vivo stability. The analogue sequences are also more persistent than natural VIP and have excellent affinity for biological membranes
SQ	Sequence 28 AA;
Query Match	96.5%; Score 137; DB 2; Length 28;
Best Local Similarity	96.4%; Pred. No. 1.6e-10;
Matches	27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY	1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Dd	1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
RESULT 11	
AAR97810	
ID	AAR97810 standard; peptide; 28 AA.
AC	AAR97810;
XX	
DT	22-AUG-1996 (first entry)
DE	Vasoactive Intestinal Peptide VIP(1-28), for dermal ulcer treatment.
XX	
KW	Vasoactive intestinal peptide; VIP; vasodilation; hyperkinetic; skin; burn; decubitis; diabetes; ulcer; bedsores; pressure sore.
XX	
OS	Synthetic.
PH	Key Location/Qualifiers
FT	Modified-site 28 /note= "amidated"
XX	
PN	JP08040926-A.
XX	
PD	13-FEB-1996.
XX	
PF	03-AUG-1994; 94JP-00182457.
XX	
PR	03-AUG-1994; 94JP-00182457.
PA	(YAKU-) YAKURIGAKU CHUO KENKYUSHO KK.
XX	
DR	WPI; 1996-157021/16.
XX	
PT	Remedy for dermal ulcer - comprises vasoactive intestinal polypeptide as active component.
XX	

PS	Claim 1; Page 2; 4pp; Japanese.	SQ	Sequence 28 AA;
XX	Vasoactive intestinal peptide and related compounds are known to have	Query Match	96.5%; Score 137; DB 2; Length 28;
CC	strong vasodilatory activity. They have now been found to be effective in	Best Local Similarity	96.4%; Pred. No. 1.6e-10;
CC	the treatment of skin ulcers, esp. decubitus ulcers but also burn ulcers,	Matches 27; Conservative	0; Mismatches 1; Indels 0; Gaps 0;
CC	diabetic ulcers, etc. VIP(1-28) is the preferred peptide for use in the		
CC	novel skin ulcer remedy		
XX		QY	1 HSDAVFTQNTYRLRKQMAVKKYLNSILN 28
XX		DB	1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28
SQ	Sequence 28 AA;		
		Query Match	96.5%; Score 137; DB 2; Length 28;
		Best Local Similarity	96.4%; Pred. No. 1.6e-10;
		Matches 27; Conservative	0; Mismatches 1; Indels 0; Gaps 0;
QY	1 HSDAVFTQNTYRLRKQMAVKKYLNSILN 28		
DB	1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28		
RESULT 12			
AAR93023			
ID	AAR93023 standard; protein; 28 AA.		
XX			
AC	AAR93023;		
XX			
DT	09-AUG-1996 (first entry)		
XX			
DE	Human glucagon degrading enzyme - VIP substrate.		
XX			
KW	Glucagon degrading enzyme; catalyst; cleavage; selectin; human; primer;		
KW	vasoactive intestinal peptide; VIP; pancreatic carcinoma cell line; PCR;		
KW	amplification; polymerase chain reaction; probe; expression vector;		
KW	eukaryote; SV40 promoter; COS-7.		
XX			
OS	Synthetic.		
XX			
PH	Key	Location/Qualifiers	
FT	Cleavage-site	17. .18	
FT	Modified-site	28	
FT		/note= "contains C-terminal amide group"	
XX			
PN	JP08023972-A.		
XX			
PD	30-JAN-1996.		
XX			
PF	19-JUL-1994; 94JP-00187936.		
XX			
PR	19-JUL-1994; 94JP-00187936.		
XX			
PA	(SUNR) SUNTORY LTD.		
XX			
DR	WPI; 1996-133414/14.		
XX			
PT	New glucagon decomposing enzyme, and DNA encoding it - for specifically		
PT	cleaving glucagon and vasoactive intestinal peptide, in the prevention		
PT	and treatment of diseases caused by excess glucagon and VIP.		
XX			
PS	Claim 1; Page 2; 18pp; Japanese.		
XX			
CC	A novel gene encoding a glucagon degrading enzyme (GDE; AAT11575) was		
CC	isolated from a human pancreatic carcinoma cell line HPC-Yo cDNA library.		
CC	The enzyme has a mol. wt. 83 kD, a pH optimum of 6.8 and catalyses the		
CC	cleavage of glucagon, vasoactive intestinal peptide and selectin		
CC	(AAR93022-4). The gene encoding the enzyme was isolated by screening the		
CC	library with an anti-GDE peptide antibody, amplifying the inserts with		
CC	the primers AAT18903-4 and probing the fragments with the probe AAT18905.		
CC	This screening resulted in the full length clone designated lambda GDE4-		
CC	2. The coding region of the clone was subsequently PCR amplified by the		
CC	primers AAT11576-7 and inserted into the eukaryotic expression vector		
CC	PKDOR under control of the SV40 promoter for production of the protein in		
CC	COS-7 cells. The protein is useful in preventing and treating diseases		
CC	characterised by an excess of glucagon or vasoactive intestinal peptide		
XX			

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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:08 ; Search time 21.875 Seconds
(without alignments)
105.825 Million cell updates/sec

Title: US-10-626-719-4
Perfect score: 142
Sequence: 1 HSDAVFTQNYTLRKQMAVKYLSILN 28

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Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
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Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	138	97.2	28	US-09-528-200-3	Sequence 3, Appli
3	138	97.2	28	US-09-528-200-5	Sequence 5, Appli
4	137	96.5	28	US-07-690-300B-1	Sequence 1, Appli
5	137	96.5	28	US-07-676-987A-1	Sequence 1, Appli
6	137	96.5	28	US-07-868-906-1	Sequence 1, Appli
7	137	96.5	28	US-08-201-092-1	Sequence 1, Appli
8	137	96.5	28	US-07-924-054-11	Sequence 11, Appli
9	137	96.5	28	US-08-243-082-1	Sequence 1, Appli
10	137	96.5	28	US-08-361-443-1	Sequence 1, Appli
11	137	96.5	28	US-08-288-681A-1	Sequence 1, Appli
12	137	96.5	28	US-07-776-272-26	Sequence 26, Appli
13	137	96.5	28	US-08-308-729-1	Sequence 1, Appli
14	137	96.5	28	US-08-062-472B-40	Sequence 40, Appli
15	137	96.5	28	US-08-171-701A-1	Sequence 1, Appli
16	137	96.5	28	US-08-741-678-1	Sequence 1, Appli
17	137	96.5	28	US-08-519-180-2	Sequence 2, Appli
18	137	96.5	28	US-08-414-424-1	Sequence 1, Appli
19	137	96.5	28	US-08-413-708B-1	Sequence 1, Appli
20	137	96.5	28	US-08-818-253-37	Sequence 37, Appli
21	137	96.5	28	US-08-897-624-1	Sequence 1, Appli
22	137	96.5	28	US-08-930-845-1	Sequence 1, Appli
23	137	96.5	28	US-08-952-568-3	Sequence 3, Appli
24	137	96.5	28	US-08-952-568-4	Sequence 4, Appli
25	137	96.5	28	US-08-952-568-5	Sequence 5, Appli
26	137	96.5	28	US-08-952-568-6	Sequence 6, Appli
27	137	96.5	28	US-08-952-568-10	Sequence 10, Appli

28	137	96.5	28	US-08-952-568-11	Sequence 11, Appli
29	137	96.5	28	US-08-952-568-12	Sequence 12, Appli
30	137	96.5	28	US-08-952-568-13	Sequence 13, Appli
31	137	96.5	28	US-09-192-048-21	Sequence 21, Appli
32	137	96.5	28	US-08-893-749-2	Sequence 2, Appli
33	137	96.5	28	US-08-818-252-37	Sequence 37, Appli
34	137	96.5	28	US-09-260-846-16	Sequence 16, Appli
35	137	96.5	28	US-08-842-322-31	Sequence 31, Appli
36	137	96.5	28	US-09-333-842-1	Sequence 1, Appli
37	137	96.5	28	US-09-446-352B-1	Sequence 1, Appli
38	137	96.5	28	US-09-316-919-53	Sequence 53, Appli
39	137	96.5	28	US-09-630-335-1	Sequence 1, Appli
40	137	96.5	28	US-09-629-632A-1	Sequence 1, Appli
41	137	96.5	28	US-09-528-200-196	Sequence 196, App
42	137	96.5	28	US-09-316-920A-53	Sequence 53, Appli
43	137	96.5	28	US-09-646-046-1	Sequence 1, Appli
44	137	96.5	28	US-09-285-422-1	Sequence 1, Appli
45	137	96.5	28	US-10-100-258B-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1
US-09-528-200-4
; Sequence 4, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARSTEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-4

Query Match 100.0%; Score 142; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 2.2e-13;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKYLSILN 28
|||||
DB 1 HSDAVFTQNYTLRKQMAVKYLSILN 28

RESULT 2
US-09-528-200-3
; Sequence 3, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARSTEN

Wed Feb 8 17:49:05 2006

```

; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGEN, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-3

Query Match          97.2%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.1e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-09-528-200-5
; Sequence 5, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGEN, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 5
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-5

Query Match          97.2%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.1e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28

RESULT 4
US-07-690-300B-1
; Sequence 1, Application US/07690300B
; Patent No. 5234907
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/690,300B
; FILING DATE: 19910424
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/374,503
; FILING DATE: 30-JUN-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8480
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa
US-07-690-300B-1

Query Match          96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 5
US-07-676-987A-1
; Sequence 1, Application US/07676987A
; Patent No. 5273963
; GENERAL INFORMATION:
; APPLICANT: TERRY, W. MOODY
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
; TITLE OF INVENTION: CELL AND NONSMALL CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROTHWELL, FIGG, ERNST & KURZ
; STREET: 555 THIRTEENTH ST. N.W.
; CITY: WASHINGTON
; STATE: D.C.
; COUNTRY: U.S.
; ZIP: 20004
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS

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/ SOFTWARE: PatentIn Release #1.0, Version #1.25
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/07/676,987A
/ FILING DATE: 19910329
/ CLASSIFICATION: 514
/ ATTORNEY/AGENT INFORMATION:
/ NAME: REPPER, GEORGE R.
/ REGISTRATION NUMBER: 31,414
/ REFERENCE/DOCKET NUMBER: 1783-101
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: (202) 783-6040
/ TELEFAX: (202) 783-6031
/ INFORMATION FOR SEQ ID NO: 1:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 28 amino acids
/ TYPE: AMINO ACID
/ TOPOLOGY: linear
/ MOLECULE TYPE: peptide
/ US-07-676-987A-1

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYTRLRKQMAVKKYLNSILN 28

RESULT 6
US-07-868-906-1
; Sequence 1, Application US/07868906
; Patent No. 5376637
; GENERAL INFORMATION:
; APPLICANT: Sawai, Kiichi
; APPLICANT: Kuroono, Masayasu
; APPLICANT: Mitani, Takahiko
; APPLICANT: Sato, Makoto
; APPLICANT: Takahashi, Haruo
; APPLICANT: Ohwaki, Hiroyuki
; TITLE OF INVENTION: PHARMACEUTICAL PREPARATION CONTAINING
; TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE OR ITS ANALOGUE
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Nikaido, Marmelstein, Murray & Oram
; STREET: 1725 K St. N.W. Suite 1000
; CITY: Washington
; STATE: D.C.
; COUNTRY: USA
; ZIP: 20006
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/868,906
; FILING DATE: 19920416
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 3-90671
; FILING DATE: 22-APR-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Oram Jr., George E.
; REGISTRATION NUMBER: 27,931
; REFERENCE/DOCKET NUMBER: 920238N
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 659-2930
; TELEFAX: (202) 887-0357
; TELEX: 440142
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
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/ TYPE: AMINO ACID
/ TOPOLOGY: linear
/ MOLECULE TYPE: peptide
/ US-07-868-906-1

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYTRLRKQMAVKKYLNSILN 28

RESULT 7
US-08-201-092-1
; Sequence 1, Application US/08201092
; Patent No. 5428015
; GENERAL INFORMATION:
; APPLICANT: KURONO, Masayasu
; APPLICANT: MITANI, Takahiko
; APPLICANT: TAKAHASHI, Haruo
; APPLICANT: SAWAI, Kiichi
; TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: ANALOGUES AND USE THEREOF
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Armstrong, Nikaido, Marmelstein, Kubovcik, &
; ADDRESSEE: Murray
; STREET: 1725 K St. N.W. Suite 1000
; CITY: Washington
; STATE: D. C.
; COUNTRY: U. S. A.
; ZIP: 20006
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/201,092
; FILING DATE: 24-FEB-1994
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 2-165739
; FILING DATE: 26-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 2-408425
; FILING DATE: 27-DEC-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/704,143
; FILING DATE: 22-MAY-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Oram Jr., George E.
; REGISTRATION NUMBER: 27,931
; REFERENCE/DOCKET NUMBER: N910809
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202)-659-2930
; TELEFAX: (202)-887-0357
; TELEX: 440142
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; FRAGMENT TYPE: C-terminal
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Small intestine, proximal
; US-08-201-092-1

Query Match 96.5%; Score 137; DB 1; Length 28;
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Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTLRKQMAVKYLSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKYLSILN 28

RESULT 8

US-07-924-054-11
; Sequence 1, Application US/07924054
; Patent No. 5486472
; GENERAL INFORMATION:
; APPLICANT: SUZUKI, No. 5486472uhiro
; APPLICANT: KITADA, Chieko
; APPLICANT: TSUDA, Masao
; TITLE OF INVENTION: ANTIBODY TO PACAP AND USE THEREOF
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: DAVID G. CONLIN; DIKE, BRONSTEIN, ROBERTS&
; STREET: 130 Water Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: US
; ZIP: 02109

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/924,054
FILING DATE: 19920903
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: RESNICK, David S
REGISTRATION NUMBER: 34235
REFERENCE/DOCKET NUMBER: 40805
TELEPHONE: (617)523-3400
TELEFAX: (617)523-6440
TELEX: 200291 STRE UR
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: protein
US-07-924-054-11

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTLRKQMAVKYLSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKYLSILN 28

RESULT 9

US-08-243-082-1
; Sequence 1, Application US/08243082
; Patent No. 5506120
; GENERAL INFORMATION:
; APPLICANT: YAMAMOTO, Hiroaki
; APPLICANT: YAMASHITA, Kunihiko
; TITLE OF INVENTION: METHOD OF PRODUCING PEPTIDES OR
; TITLE OF INVENTION: PROTEINS
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Spencer, Frank & Schneider
; STREET: 1111 Nineteenth Street, N.W.

CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20036
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/243,082
FILING DATE:

CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/853,754
FILING DATE: 05-JUN-1992
ATTORNEY/AGENT INFORMATION:
NAME: Schneller, John W.
REGISTRATION NUMBER: 26,031
REFERENCE/DOCKET NUMBER: KUWAT 0010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 828-8000
TELEFAX: (202) 828-8038
TELEX: SPENCER 64267
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
US-08-243-082-1

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTLRKQMAVKYLSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKYLSILN 28

RESULT 10

US-08-361-443-1
; Sequence 1, Application US/08361443
; Patent No. 5521157
; GENERAL INFORMATION:
; APPLICANT: No. 5521157a, Hitoshi
; APPLICANT: Yamakawa, Hidehumi
; APPLICANT: Yoshina, Shigeaki
; APPLICANT: Ishida, Tsutomu
; APPLICANT: Tomiya, No. 5521157oru
; TITLE OF INVENTION: MODIFIED POLYPEPTIDE COMPOUND AND USE OF
; TITLE OF INVENTION: THE SAME
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: SUGHRUE, MION, ZINN, MACPEAK & SEAS
; STREET: 2100 Pennsylvania Ave.
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/361,443
FILING DATE:
CLASSIFICATION: 530

;; PRIOR APPLICATION DATA:
;; APPLICATION NUMBER: JP Hei. 5-319815
;; FILING DATE: 20-DEC-1993
;; INFORMATION FOR SEQ ID NO: 1:
;; SEQUENCE CHARACTERISTICS:
;; LENGTH: 28 amino acids
;; TYPE: amino acid
;; STRANDEDNESS: single
;; TOPOLOGY: linear
;; MOLECULE TYPE: peptide
US-08-361-443-1

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLSILN 28

RESULT 11
US-08-288-681A-1
; Sequence 1, Application US/08288681A
; Patent No. 5595897
; GENERAL INFORMATION:
; APPLICANT: MIDOUX, PATRICK; ERBACHER,
; APPLICANT: PATRICK; ROCHE-DEGREMONT, ANNIE-CLAUDE;
; APPLICANT: MONSIGNY, MICHEL
; TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC
; TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
; TITLE OF INVENTION: PREPARATION AND THEIR USAGE FOR TRANSFECTION
; NUMBER OF SEQUENCES: 7
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BIERMAN & MUSERLIAN
; STREET: 600 THIRD AVENUE
; CITY: NEW YORK
; STATE: NEW YORK
; COUNTRY: USA
; ZIP: 10016
; COMPUTER READABLE FORM:
; MEDIUM TYPE: FLOPPY DISK
; COMPUTER: IBM PC COMPATIBLE
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: ASCII
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/288,681A
; FILING DATE: 10-AUG-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR/94/05174
; FILING DATE: 28-APR-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: CHARLES A. MUSERLIAN
; REGISTRATION NUMBER: 19,683
; REFERENCE/DOCKET NUMBER: 410.005
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 661-8000
; TELEFAX: (212) 661-8002
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28
; TYPE: Amino Acid
; STRANDEDNESS: Unknown
; TOPOLOGY: Unknown
; MOLECULE TYPE: PEPTIDE
US-08-288-681A-1

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLSILN 28

RESULT 12
US-07-776-272-26
; Sequence 26, Application US/07776272
; Patent No. 5612454
; GENERAL INFORMATION:
; APPLICANT: Kaminuma, Toshihiko
; APPLICANT: Iida, Toshii
; APPLICANT: Tajima, Masahiro
; TITLE OF INVENTION: Process for Purification of Polypeptide
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Wegner, Cantor, Mueller & Player
; STREET: 1233 20th St. N.W. P.O. Box 18218
; CITY: Washington
; STATE: District of Columbia
; COUNTRY: United States of America
; ZIP: 20036-8218
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/776,272
; FILING DATE: 19911129
; CLASSIFICATION: 530
; ATTORNEY/AGENT INFORMATION:
; NAME: Player, William E
; REGISTRATION NUMBER: 31,409
; REFERENCE/DOCKET NUMBER: P-450-23167
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-887-0400
; TELEFAX: 202-887-0605
; TELEX: 440706
; INFORMATION FOR SEQ ID NO: 26:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: YES
US-07-776-272-26

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLSILN 28

RESULT 13
US-08-308-729-1
; Sequence 1, Application US/08308729
; Patent No. 5677419
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Cyclic Vasoactive Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 73
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110

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/
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ OPERATING SYSTEM: PC-DOS/MS-DOS
/ SOFTWARE: Patentin Release #1.0, Version #1.25
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/08/308,729
/ FILING DATE:
/ CLASSIFICATION: 530
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: US/08/153,530
/ FILING DATE:
/ APPLICATION NUMBER: US 07/773,747
/ FILING DATE: 11-OCT-1991
/ ATTORNEY/AGENT INFORMATION:
/ NAME: Pokras, Bruce A.
/ REGISTRATION NUMBER: 32,748
/ REFERENCE/DOCKET NUMBER: 8322
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: (201) 235-5801
/ TELEFAX: (201) 235-3500
/ INFORMATION FOR SEQ ID NO: 1:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 28 amino acids
/ TYPE: amino acid
/ TOPOLOGY: linear
/ MOLECULE TYPE: peptide
/ HYPOTHETICAL: NO
/ ANTI-SENSE: NO
/ ORGANISM: Sus scrofa
/ ORGANISM INFORMATION:
/ DOCUMENT NUMBER: EP 325 044 A A
/ FILING DATE: 22-DEC-1987
/ PUBLICATION DATE: 26-JUL-1989
/ RELEVANT RESIDUES IN SEQ ID NO: 1: FROM 18 TO 23
/
/ US-08-308-729-1
/
/ Query Match 96.5%; Score 137; DB 1; Length 28;
/ Best Local Similarity 96.4%; Pred. No. 1.1e-12;
/ Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
/
/ QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
/ Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
/
/ RESULT 14
/ US-08-062-472B-40
/ Sequence 40, Application US/08062472B
/ Patent No. 5695954
/ GENERAL INFORMATION:
/ APPLICANT: Sherwood, Nancy G M
/ APPLICANT: Parker, David B
/ APPLICANT: McRory, John E
/ APPLICANT: Lescheid, David W
/ TITLE OF INVENTION: DNA ENCODING TWO FISH NEUROPEPTIDES
/ NUMBER OF SEQUENCES: 49
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: KLARQUIST, SPARKMAN, CAMPBELL, LEIGH &
/ ADDRESSEE: WHINSTON, LLP
/ STREET: ONE WORLD TRADE CENTER, SUITE 1600, 121 S.W.
/ CITY: PORTLAND
/ STATE: OREGON
/ COUNTRY: USA
/ ZIP: 97204-2988
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ OPERATING SYSTEM: PC-DOS/MS-DOS
/ SOFTWARE: Patentin Release #1.0, Version #1.30
/ CURRENT APPLICATION DATA:
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/ APPLICATION NUMBER: US/08/062,472B
/ FILING DATE: 14-MAY-1993
/ CLASSIFICATION: 435
/ ATTORNEY/AGENT INFORMATION:
/ NAME: POLLEY, RICHARD J
/ REGISTRATION NUMBER: 28107
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: (503) 226-7391
/ TELEFAX: (503) 228-9446
/ INFORMATION FOR SEQ ID NO: 40:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 28 amino acids
/ TYPE: amino acid
/ STRANDEDNESS: single
/ TOPOLOGY: linear
/ MOLECULE TYPE: peptide
/
/ US-08-062-472B-40
/
/ Query Match 96.5%; Score 137; DB 1; Length 28;
/ Best Local Similarity 96.4%; Pred. No. 1.1e-12;
/ Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
/
/ QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
/ Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
/
/ RESULT 15
/ US-08-171-701A-1
/ Sequence 1, Application US/08171701A
/ Patent No. 5721211
/ GENERAL INFORMATION:
/ APPLICANT:
/ TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
/ TREATING SMALL CELL AND NONSMALL
/ CELL LUNG CANCERS
/ NUMBER OF SEQUENCES: 3
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: 3.5" Floppy Disk
/ COMPUTER: IBM PC Compatible
/ OPERATING SYSTEM: MS-DOS
/ SOFTWARE: WordPerfect, Version 5.1 Plus
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/08/171,701A
/ FILING DATE: December 22, 1993
/ INFORMATION FOR SEQ ID NO: 1:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 28 Amino Acids
/ TYPE: Amino Acid
/ TOPOLOGY: Linear
/ MOLECULE TYPE: Peptide
/ FRAGMENT TYPE: N-terminal
/ FEATURE:
/ NAME/KEY: Modified-site
/ LOCATION: 1
/ OTHER INFORMATION:
/ FEATURE:
/ NAME/KEY: Modified-site
/ LOCATION: 28
/ OTHER INFORMATION:
/
/ US-08-171-701A-1
/
/ Query Match 96.5%; Score 137; DB 1; Length 28;
/ Best Local Similarity 96.4%; Pred. No. 1.1e-12;
/ Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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/ QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
/ Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
/
/ Search completed: January 25, 2006, 15:23:43
/ Job time : 21.875 secs
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GenCore version 5.1.6
Copyright (c) 1993 - 2006 Compugen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:48 ; Search time 53.625 Seconds
(without alignments)
218.167 Million cell updates/sec

Title: US-10-626-719-4
Perfect score: 142
Sequence: 1 HSDAVFTQNYTRLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA.Main:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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3	137	96.5	28	3	US-09-929-818-188
4	137	96.5	28	3	US-09-929-818-189
5	137	96.5	28	3	US-09-999-745-53
6	137	96.5	28	3	US-09-954-000-37
7	137	96.5	28	4	US-10-090-109A-1
8	137	96.5	28	4	US-10-044-722-8
9	137	96.5	28	4	US-10-004-530A-17
10	137	96.5	28	4	US-10-114-716A-3
11	137	96.5	28	4	US-10-211-994-1
12	137	96.5	28	4	US-10-197-954-145
13	137	96.5	28	4	US-10-100-256B-1
14	137	96.5	28	4	US-10-254-569A-1
15	137	96.5	28	4	US-10-201-288-31
16	137	96.5	28	4	US-10-343-654-22
17	137	96.5	28	4	US-10-416-822-1
18	137	96.5	28	4	US-10-467-059-14
19	137	96.5	28	5	US-10-494-634-7
20	137	96.5	28	5	US-10-718-071-36
21	137	96.5	28	5	US-10-788-563-17
22	137	96.5	28	5	US-10-760-085-145
23	137	96.5	28	5	US-10-892-981A-1
24	137	96.5	28	5	US-10-769-803-2
25	137	96.5	28	5	US-10-919-325-32
26	137	96.5	28	5	US-10-898-143-1
27	137	96.5	28	5	US-10-930-548-3

28	137	96.5	28	5	US-10-770-712-56	Sequence 56, Appl
29	137	96.5	28	5	US-10-799-897A-1	Sequence 1, Appl
30	137	96.5	28	6	US-11-066-697-454	Sequence 454, App
31	137	96.5	28	6	US-11-066-697-455	Sequence 455, App
32	137	96.5	29	4	US-10-131-543-11	Sequence 11, Appl
33	137	96.5	29	4	US-10-131-546-11	Sequence 11, Appl
34	137	96.5	29	4	US-10-131-546-11	Sequence 11, Appl
35	137	96.5	29	4	US-10-415-024-11	Sequence 11, Appl
36	137	96.5	29	6	US-11-086-966-11	Sequence 11, Appl
37	137	96.5	29	6	US-11-086-966-11	Sequence 11, Appl
38	137	96.5	30	3	US-09-929-818-203	Sequence 203, App
39	137	96.5	30	3	US-09-929-818-204	Sequence 204, App
40	137	96.5	30	3	US-09-929-818-205	Sequence 205, App
41	137	96.5	31	4	US-10-131-543-9	Sequence 9, Appl
42	137	96.5	31	4	US-10-131-543-10	Sequence 10, Appl
43	137	96.5	31	4	US-10-131-543-16	Sequence 16, Appl
44	137	96.5	31	4	US-10-131-546-9	Sequence 9, Appl
45	137	96.5	31	4	US-10-131-546-10	Sequence 10, Appl

ALIGNMENTS

RESULT 1
US-09-929-818-190
; Sequence 190, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 190
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
US-09-929-818-190

Query Match 100.0%; Score 142; DB 3; Length 28;
Best Local Similarity 100.0%; Pred. No. 4.5e-13;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HSDAVFTQNYTRLRKQMAVKYLSILN 28
DB 1 HSDAVFTQNYTRLRKQMAVKYLSILN 28

RESULT 2
US-09-929-818-1
; Sequence 1, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE


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; GENERAL INFORMATION:
; APPLICANT: Teien, Roger Y.
; APPLICANT: Miyawaki, Atsushi
; TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR
; TITLE OF INVENTION: DETECTION OF ANALYTES
; FILE REFERENCE: 07257/042001
; CURRENT APPLICATION NUMBER: US/09/554,000
; CURRENT FILING DATE: 2000-04-20
; PRIOR APPLICATION NUMBER: 08/818,252
; PRIOR FILING DATE: 1997-03-14
; NUMBER OF SEQ ID NOS: 56
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 37
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-554-000-37

Query Match          96.5%; Score 137; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 7
US-10-090-109A-1
; Sequence 1, Application US/10090109A
; Publication No. US20020151458A1
; GENERAL INFORMATION:
; APPLICANT: Perez Gomariz, et al
; TITLE OF INVENTION: Method For Treating and Preventing Septic Shock With
; TITLE OF INVENTION: VPAC1R, VPAC2R, and PAC1R Agonists
; FILE REFERENCE: G80-O16 CIP
; CURRENT APPLICATION NUMBER: US/10/090,109A
; CURRENT FILING DATE: 2002-06-17
; PRIOR APPLICATION NUMBER: US 09/446,352
; PRIOR FILING DATE: 2000-12-17
; NUMBER OF SEQ ID NOS: 3
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: unknown
; FEATURE:
; OTHER INFORMATION: Isolated from small intestines and brains of pigs
US-10-090-109A-1

Query Match          96.5%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 8
US-10-044-722-8
; Sequence 8, Application US/10044722
; Publication No. US20020182729A1
; GENERAL INFORMATION:
; APPLICANT: DICICCO-BLOOM, Emanuel
; APPLICANT: NICOR, Arnaud
; APPLICANT: LU, Nairu
; TITLE OF INVENTION: Pituitary adenylate cyclase-activating polypeptide (PACAP) is an
; TITLE OF INVENTION: mitogenic signal for selected neuronal precursors in vivo
; FILE REFERENCE: 270/175
; CURRENT APPLICATION NUMBER: US/10/044,722
; CURRENT FILING DATE: 2002-01-11
; NUMBER OF SEQ ID NOS: 8
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; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-044-722-8

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Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 9
US-10-004-530A-17
; Sequence 17, Application US/10004530A
; Publication No. US20030050436A1
; GENERAL INFORMATION:
; APPLICANT: Coy, David H.
; APPLICANT: Moreau, Jacques-Pierre
; APPLICANT: Kim, Sun H.
; TITLE OF INVENTION: OCTAPEPTIDE BOMBESIN ANALOGS
; FILE REFERENCE: 00537-00900K
; CURRENT APPLICATION NUMBER: US/10/004,530A
; CURRENT FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 09/260,846
; PRIOR FILING DATE: 1999-03-02
; PRIOR APPLICATION NUMBER: 08/337,127
; PRIOR FILING DATE: 1994-11-10
; PRIOR APPLICATION NUMBER: 07/779,039
; PRIOR FILING DATE: 1991-10-18
; PRIOR APPLICATION NUMBER: 07/502,438
; PRIOR FILING DATE: 1990-03-30
; PRIOR APPLICATION NUMBER: 07/397,169
; PRIOR FILING DATE: 1989-08-21
; PRIOR APPLICATION NUMBER: 07/376,555
; PRIOR FILING DATE: 1989-07-07
; PRIOR APPLICATION NUMBER: 07/317,941
; PRIOR FILING DATE: 1989-03-02
; PRIOR APPLICATION NUMBER: 07/282,328
; PRIOR FILING DATE: 1988-12-09
; PRIOR APPLICATION NUMBER: 07/257,998
; PRIOR FILING DATE: 1988-10-14
; PRIOR APPLICATION NUMBER: 07/248,771
; PRIOR FILING DATE: 1988-09-23
; PRIOR APPLICATION data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-004-530A-17

Query Match          96.5%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 10
US-10-114-716A-3
; Sequence 3, Application US/10114716A
; Publication No. US20030078203A1
; GENERAL INFORMATION:
; APPLICANT: Sudhir Paul
; APPLICANT: Yasuhiro Nishiyama
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Wed Feb 8 17:49:05 2006

us-10-626-719-4.rapbm

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; TITLE OF INVENTION: Covalently Reactive Transition State
; FILE REFERENCE: UTH001H8
; CURRENT APPLICATION NUMBER: US/10/114,716A
; PRIOR FILING DATE: 2002-04-01
; PRIOR APPLICATION NUMBER: 09/862,849
; PRIOR FILING DATE: 2001-05-22
; PRIOR APPLICATION NUMBER: 09/046,373
; PRIOR FILING DATE: 1998-03-23
; PRIOR APPLICATION NUMBER: 60/280,624
; PRIOR FILING DATE: 2001-03-31
; NUMBER OF SEQ ID NOS: 57
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Vasoactive intestinal peptide
US-10-114-716A-3

Query Match          96.5%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 1; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 11
US-10-211-994-1
; Sequence 1, Application US/10211994
; Publication No. US20030082201A1
; GENERAL INFORMATION:
; APPLICANT: Rao, M.R.S.
; APPLICANT: Sengupta, Paromita
; APPLICANT: Prasad, Sudhanand
; APPLICANT: Burman, Anand C.
; APPLICANT: Mukherjee, Rama
; APPLICANT: Thomas, Becky
; TITLE OF INVENTION: MULTIVALENT SYNTHETIC VACCINE FOR CANCER
; FILE REFERENCE: U014152-1
; CURRENT APPLICATION NUMBER: US/10/211,994
; CURRENT FILING DATE: 2002-08-02
; PRIOR FILING DATE: 60/309,975
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-211-994-1

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Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 1; Gaps 0;

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Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 12
US-10-197-954-145
; Sequence 145, Application US/10197954
; Publication No. US20030119021A1
; GENERAL INFORMATION:
; APPLICANT: K'ster, Hubert
; APPLICANT: Siddiqi, Suhaib
; APPLICANT: Little, Daniel
; TITLE OF INVENTION: Capture Compounds, Collections Thereof
; TITLE OF INVENTION: And Methods For Analyzing The Proteome And Complex
; TITLE OF INVENTION: Compositions

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; FILE REFERENCE: 24743-2305
; CURRENT APPLICATION NUMBER: US/10/197,954
; CURRENT FILING DATE: 2002-07-16
; PRIOR APPLICATION NUMBER: 60/306,019
; PRIOR FILING DATE: 2001-07-16
; PRIOR APPLICATION NUMBER: 60/314,123
; PRIOR FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 60/363,433
; PRIOR FILING DATE: 2002-03-11
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 145
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-197-954-145

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Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 1; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 13
US-10-100-256B-1
; Sequence 1, Application US/10100256B
; Publication No. US20030152511A1
; GENERAL INFORMATION:
; APPLICANT: Thakur, Madhukar
; TITLE OF INVENTION: RADIOLABELLED VASOACTIVE INTESTINAL
; FILE REFERENCE: 8321-104-DI1
; CURRENT APPLICATION NUMBER: US/10/100,256B
; CURRENT FILING DATE: 2002-03-15
; PRIOR APPLICATION NUMBER: US 09/333,842
; PRIOR FILING DATE: 1999-06-15
; PRIOR APPLICATION NUMBER: US 60/089,364
; PRIOR FILING DATE: 1998-06-15
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-100-256B-1

Query Match          96.5%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 1; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 14
US-10-254-569A-1
; Sequence 1, Application US/10254569A
; Publication No. US20030158110A1
; GENERAL INFORMATION:
; APPLICANT: BURMAN C, ANAND
; APPLICANT: PRASAD, SUDHANAND
; APPLICANT: MUKHERJEE, RAMA
; APPLICANT: SINGH T, ANU
; APPLICANT: MATHUR, ARCHNA
; APPLICANT: GUPTA, NSENA
; TITLE OF INVENTION: VASOACTIVE INTESTINAL PEPTIDES ANALOGS
; FILE REFERENCE: 014071-1

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; CURRENT APPLICATION NUMBER: US/10/254,569A
; CURRENT FILING DATE: 2002-12-05
; PRIOR APPLICATION NUMBER: 136/DEL/2000
; PRIOR FILING DATE: 2000-02-18
; PRIOR APPLICATION NUMBER: 09/630,335
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn ver. 2.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-254-569A-1

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Db      1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 15
US-10-201-288-31
; Sequence 31, Application US/10201288
; Publication No. US2003020373A1
; GENERAL INFORMATION:
; APPLICANT: SCHLEUNING, Wolf-Dieter
; APPLICANT: SCHULZ, Torsten
; TITLE OF INVENTION: METHOD FOR IDENTIFYING A PHARMACOLOGICALLY ACTIVE SUBSTANCE
; FILE REFERENCE: Q71278
; CURRENT APPLICATION NUMBER: US/10/201,288
; CURRENT FILING DATE: 2002-10-23
; PRIOR APPLICATION NUMBER: DE 102 08 178.5
; PRIOR FILING DATE: 2002-02-20
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 31
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Human
US-10-201-288-31

Query Match      96.5%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
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Db      1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 15:08:34 ; Search time 3.5 Seconds
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86.633 Million cell updates/sec

Title: us-10-626-719-4

Perfect score: 142

Sequence: 1 HSDAVFTQNYTLRKQMAVKYLNLSILN 28

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Total number of hits satisfying chosen parameters: 75621

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

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- 3: /cgn2_6/prodata/2/pubpa/US07_NEW_PUB.pap.*
- 4: /cgn2_6/prodata/2/pubpa/PCT_NEW_PUB.pap.*
- 5: /cgn2_6/prodata/2/pubpa/US09_NEW_PUB.pap.*
- 6: /cgn2_6/prodata/2/pubpa/US10_NEW_PUB.pap.*
- 7: /cgn2_6/prodata/2/pubpa/US11_NEW_PUB.pap.*
- 8: /cgn2_6/prodata/2/pubpa/US60_NEW_PUB.pap.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
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2	137	96.5	28	7	US-11-175-690-353
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4	137	96.5	637	7	US-11-175-690-266
5	101	71.1	636	7	US-11-175-690-240
6	100	70.4	27	7	US-11-175-690-326
7	100	70.4	27	7	US-11-175-690-327
8	100	70.4	38	7	US-11-175-690-328
9	100	70.4	38	7	US-11-175-690-329
10	100	70.4	636	7	US-11-175-690-239
11	100	70.4	647	7	US-11-175-690-241
12	100	70.4	647	7	US-11-175-690-242
13	75	52.8	636	7	US-11-175-690-278
14	74	52.1	27	7	US-11-175-690-365
15	74	52.1	27	7	US-11-175-690-366
16	74	52.1	636	7	US-11-175-690-277
17	69	48.6	30	7	US-11-112-277-30
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19	58	40.8	30	7	US-11-112-277-29
20	58	40.8	49	6	US-10-997-081A-26
21	58	40.8	49	6	US-10-997-081A-27
22	58	40.8	49	6	US-10-997-081A-28
23	58	40.8	49	6	US-10-997-081A-29
24	58	40.8	49	6	US-10-997-081A-30
25	58	40.8	49	6	US-10-997-081A-31

26 58 40.8 49 6 US-10-997-081A-32 Sequence 32, Appl
27 58 40.8 49 6 US-10-997-081A-35 Sequence 35, Appl
28 58 40.8 95 6 US-10-997-081A-25 Sequence 25, Appl
29 58 40.8 97 6 US-10-997-081A-11 Sequence 11, Appl
30 58 40.8 97 6 US-10-997-081A-18 Sequence 18, Appl
31 58 40.8 97 6 US-10-997-081A-19 Sequence 19, Appl
32 58 40.8 97 6 US-10-997-081A-20 Sequence 20, Appl
33 58 40.8 97 6 US-10-997-081A-21 Sequence 21, Appl
34 58 40.8 97 6 US-10-997-081A-22 Sequence 22, Appl
35 58 40.8 97 6 US-10-997-081A-23 Sequence 23, Appl
36 58 40.8 97 6 US-10-997-081A-40 Sequence 40, Appl
37 58 40.8 97 6 US-10-997-081A-41 Sequence 41, Appl
38 58 40.8 105 6 US-10-997-081A-10 Sequence 10, Appl
39 57 40.1 30 7 US-11-112-277-31 Sequence 31, Appl
40 51 35.9 636 7 US-11-175-690-268 Sequence 268, App
41 50 35.2 27 7 US-11-175-690-354 Sequence 354, App
42 50 35.2 27 7 US-11-175-690-355 Sequence 355, App
43 50 35.2 636 7 US-11-175-690-267 Sequence 267, App
44 47 33.1 556 7 US-11-124-368A-303 Sequence 303, App
45 46 32.4 30 7 US-11-174-089-181 Sequence 181, App

ALIGNMENTS

RESULT 1

US-11-175-690-352
; Sequence 352, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseeltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 352
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-352

Query Match 96.5%; Score 137; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.8e-15;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKYLNLSILN 28
Db 1 HSDAVFTQNYTLRKQMAVKYLNLSILN 28

RESULT 2

US-11-175-690-353
; Sequence 353, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:

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; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 353
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-353

Query Match          96.5%; Score 137; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.8e-15;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-11-175-690-265
; Sequence 265, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match          96.5%; Score 137; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 2.3e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db 25 HSDAVFTDNYTRLRKQMAVKKYLNSILN 52

RESULT 5
US-11-175-690-240
; Sequence 240, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
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1 HSDAVFTONYTRLRKOMAVKXYLSIL 27 Qv

[illegible]

```

RESULT 14
US-11-175-690-364
; Sequence 364, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 364
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-364

Query Match          52.1%; Score 74; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 2e-05;
Matches 12; Conservative 9; Mismatches 6; Indels 0; Gaps 0;

QY      1 HSDAVETQNYTRLRKQMAYKKVYLSIL 27
       |:| | | :| | | :| | :| | | | :|
Db       1 HDGVTSDFSKLLGQLSAKKYLESIM 27

RESULT 15
US-11-175-690-365
; Sequence 365, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 365
; LENGTH: 27

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; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-365

Query Match      52.1% Score 74; DB 7; Length 27;
Best Local Similarity 44.4% Pred. No. 2e-05;
Matches 12; Conservative 9; Mismatches 6; Indels 0; Gaps 0;

QY      1 HSDAVFTQNYTRLRKQMAVKKYLNSIL 27
|:| | | | | | | | | | | | | | | | | |
Db      1 HADGVFTSDFSKLLGQLSAKKYLESLM 27

Search completed: January 25, 2006, 15:31:42
Job time : 3.5 secs
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:55:03 ; Search time 13.25 Seconds
(without alignments)
203.326 Million cell updates/sec

Title: US-10-626-719-4

Perfect score: 142

Sequence: 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

PIR_80.*

1: pir1.*

2: pir2.*

3: pir3.*

4: pir4.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	137	96.5	28	B60071	vasoactive intesti
2	137	96.5	28	A60304	vasoactive intesti
3	137	96.5	55	VRBO	vasoactive intesti
4	137	96.5	55	VRBH	vasoactive intesti
5	137	96.5	55	VRSH	vasoactive intesti
6	137	96.5	58	VRPG	vasoactive intesti
7	137	96.5	145	A60038	vasoactive intesti
8	137	96.5	170	VRHU	vasoactive intesti
9	137	96.5	170	VRRT	vasoactive intesti
10	137	96.5	170	A60037	vasoactive intesti
11	124	87.3	55	VRGP	vasoactive intesti
12	122	85.9	165	VRCH	vasoactive intesti
13	121	85.2	28	A60303	vasoactive intesti
14	114	80.3	28	A38232	vasoactive intesti
15	111	78.2	25	QJ0361	vasoactive intesti
16	100	70.4	27	A61071	pituitary adenylat
17	100	70.4	38	A49165	pituitary adenylat
18	100	70.4	173	A34767	neuropeptides prec
19	100	70.4	175	A37786	pituitary adenylat
20	100	70.4	176	I84638	pituitary adenylat
21	100	70.4	176	A34044	pituitary adenylat
22	100	70.4	195	I50456	pituitary adenylat
23	94	66.2	38	A61070	pituitary adenylat
24	87	61.3	35	HWGHD	exendin-2 - Gila m
25	80	56.3	38	HWGHS	exendin-1 - Mexica
26	71	50.0	104	A32731	somatoliberin prec
27	70	49.3	103	A41410	somatoliberin prec
28	63	44.4	27	SECH	secretin - chicken
29	63	44.4	44	RHBOS	somatoliberin - bo

30	58	40.8	44	1	RHPG	somatoliberin - pi
31	58	40.8	108	1	RHHUS	somatoliberin prec
32	58	40.8	443	2	C70392	gamma-glutamyl pho
33	56	39.4	206	2	I51301	proglucagon - chic
34	53	37.3	772	2	C69990	transcription regu
35	52	36.6	27	2	A27267	secretin - dog
36	52	36.6	276	2	AD1860	two-component resp
37	52	36.6	418	2	A97300	gamma-glutamyl pho
38	51.5	36.3	266	2	E71612	ribosomal protein
39	50	35.2	27	1	S07443	secretin - human
40	50	35.2	27	1	SEBO	secretin - bovine
41	50	35.2	27	1	SESH	secretin - sheep
42	50	35.2	131	1	SEPG	secretin precursor
43	50	35.2	168	2	F90095	hypothetical prote
44	50	35.2	194	2	T27608	hypothetical prote
45	50	35.2	194	2	T29172	hypothetical prote

ALIGNMENTS

RESULT 1

B60071

vasoactive intestinal peptide - rhesus macaque

C:Species: Macaca mulatta (rhesus macaque)

C:Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 20-Mar-1998

C:Accession: B60071

R:Yu, J.; Xin, Y.; Eng, J.; Yalow, R.S.

Regul. Pept. 32, 39-45, 1991

A:Title: Rhesus monkey gastroenteropancreatic hormones: relationship to human sequences.

A:Reference number: A60071; MUID:91164506; PMID:2003150

A:Accession: B60071

A:Status: protein sequence not shown

A:Molecule type: protein

A:Residues: 1-28 <YUA>

A:Cross-references: UNIPARC:UPI000002D1C0

A:Note: the sequence is identical with the human sequence

C:Superfamily: glucagon

C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 96.5%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.8e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28

DB 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28

RESULT 2

A60304

vasoactive intestinal peptide - dog

N:Alternate names: VIP

C:Species: Canis lupus familiaris (dog)

C:Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change 09-Jul-2004

C:Accession: A60304

R:Eng, J.; Pan, Y.C.E.; Raufman, J.P.; Yalow, R.S.

Regul. Pept. Suppl. 3, S14, 1985

A:Title: Purification and sequencing of dog and guinea pig VIP's.

A:Reference number: A60304

A:Accession: A60304

A:Molecule type: protein

A:Residues: 1-28 <ENG>

A:Cross-references: UNIPROT:P04565; UNIPARC:UPI000002D1C0

C:Superfamily: glucagon

C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 96.5%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.8e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28

DB 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28

Wed Feb 8 17:49:05 2006

Query Match 96.5%; Score 137; DB 1; Length 55;
Best Local Similarity 96.4%; Pred. No. 3.6e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNTYRLRKQMAVKKYLNSILN 28
DB 28 HSDAVFTQNTYRLRKQMAVKKYLNSILN 55

RESULT 5
VRBQ
N:Contains: intestinal peptide precursor - sheep (fragments)
N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C:Date: 31-Mar-1993 #sequence revision 19-Apr-1996 #text_change 09-Jul-2004
C:Accession: B60072; A60072; C61063; A43974
R:Bounjoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.
Regul. Pept. 32, 169-179, 1991
A:Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A:Reference number: A60072; MUID:91239834; PMID:2034821
A:Accession: B60072
A:Molecule type: protein
A:Residues: 1-27 <BOU>
A:Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515
A:Accession: A60072
A:Molecule type: protein
A:Residues: 28-55 <BO2>
A:Cross-references: UNIPARC:UPI000002D1C0
R:Miyata, A.; Jiang, L.; Stibbs, H.H.; Arimura, A.
Regul. Pept. 38, 145-154, 1992
A:Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreact
A:Reference number: A61063; MUID:92245116; PMID:1574609
A:Accession: C61063
A:Molecule type: protein
A:Residues: 28-55 <MY>
A:Cross-references: UNIPARC:UPI000002D1C0
A:Experimental source: hypothalamus, intestine
R:Gaivelin, G.
Peptides 11, 703-706, 1990
A:Title: Isolation and primary structure of VIP from sheep brain.
A:Reference number: A43974; MUID:91045331; PMID:2235680
A:Accession: A43974
A:Molecule type: protein
A:Residues: 28-55 <GAF>
A:Cross-references: UNIPARC:UPI000002D1C0
A:Experimental source: brain
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; brain; duplication; hormone; intestine; neuropeptide;
F:1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F:55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 96.5%; Score 137; DB 1; Length 55;
Best Local Similarity 96.4%; Pred. No. 3.6e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNTYRLRKQMAVKKYLNSILN 28
DB 28 HSDAVFTQNTYRLRKQMAVKKYLNSILN 55

RESULT 6
VRPG
N:Contains: intestinal peptide precursor - pig (fragments)
N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Sus scrofa domestica (domestic pig)
C:Date: 24-Apr-1994 #sequence revision 05-Jan-1996 #text_change 09-Jul-2004
C:Accession: A01549; A60300; A01550; J04017; A56754; S09590
R:Tatemoto, K.; Mutt, V.
Proc. Natl. Acad. Sci. U.S.A. 78, 6603-6607, 1981
A:Title: Isolation and characterization of the intestinal peptide porcine PHI (PHI-27),
A:Reference number: A01549; MUID:82082498; PMID:6947244

Query Match 96.5%; Score 137; DB 1; Length 55;
Best Local Similarity 96.4%; Pred. No. 3.6e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNTYRLRKQMAVKKYLNSILN 28
DB 28 HSDAVFTQNTYRLRKQMAVKKYLNSILN 55

RESULT 4
VRBQ
N:Contains: intestinal peptide precursor - rabbit (fragments)
N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Oryctolagus cuniculus (domestic rabbit)
C:Date: 03-Feb-1993 #sequence revision 19-Apr-1996 #text_change 20-Mar-1998
C:Accession: B60415; A60415
R:Gossen, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht,
Peptides 11, 123-128, 1990
A:Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.
A:Reference number: A60415; MUID:90259845; PMID:2342988
A:Accession: B60415
A:Molecule type: protein
A:Residues: 1-27 <GOS>
A:Cross-references: UNIPARC:UPI00000351DB
A:Accession: A60415
A:Molecule type: protein
A:Residues: 28-55 <GOS>
A:Cross-references: UNIPARC:UPI00000351DB
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
F:1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F:55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 96.5%; Score 137; DB 1; Length 55;
Best Local Similarity 96.4%; Pred. No. 3.6e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNTYRLRKQMAVKKYLNSILN 28
DB 28 HSDAVFTQNTYRLRKQMAVKKYLNSILN 55

RESULT 3
VRBQ
N:Contains: intestinal peptide precursor - bovine (fragments)
N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Bos primigenius taurus (cattle)
C:Date: 26-Apr-1996 #sequence revision 03-May-1996 #text_change 07-May-1999
C:Accession: A61643; A61644; S09689
R:Carlquist, M.; Kaiser, R.; Tatemoto, K.; Joernvall, H.; Mutt, V.
Eur. J. Biochem. 144, 243-247, 1984
A:Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper in
A:Reference number: A61643; MUID:85027215; PMID:6548446
A:Accession: A61643
A:Molecule type: protein
A:Residues: 1-27 <CAR>
A:Cross-references: UNIPARC:UPI0000173515
R:Carlquist, M.; Mutt, V.; Joernvall, H.
FEBS Lett. 108, 457-460, 1979
A:Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).
A:Reference number: A61644; MUID:80092152; PMID:520589
A:Accession: A61644
A:Molecule type: protein
A:Residues: 28-55 <CAR>
A:Cross-references: UNIPARC:UPI000002D1C0
R:Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht,
Biochim. Biophys. Acta 1038, 355-359, 1990
A:Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A:Reference number: S09688; MUID:90254163; PMID:2340294
A:Contents: annotation; comparison of mammalian PHI sequences
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
F:1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F:55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Biochem. Biophys. Res. Commun. 185, 134-141, 1992
 A>Title: Isolation and characterization of peptides which act on rat platelets, from a p
 A/Reference number: JH0618; MUID:92287083; PMID:1318039
 A/Accession: JH0618
 A/Molecule type: protein
 A/Residues: 125-152 <KIT>
 A/Cross-references: UNIPARC:UPI000002D1C0
 A/Experimental source: pheochromocytoma
 R/Yamagami, T.; Ohsawa, K.; Nishizawa, M.; Inoue, C.; Gotoh, E.; Yanaihar, N.; Yamamoto
 Ann. N. Y. Acad. Sci. 527, 87-102, 1988
 A>Title: Complete nucleotide sequence of human vasoactive intestinal peptide/PHM-27 gene
 A/Reference number: IS1955; MUID:88267775; PMID:2839091
 A/Accession: IS1955
 A/Status: translated from GB/EMBL/DBJ
 A/Molecule type: DNA
 A/Residues: 1-170 <RES>
 A/Cross-references: UNIPARC:UPI000003B343; GB:M33027; NID:G340253; PIDN:AAA69515.1; PID:
 R/Gozes, I.; Giladi, E.; Shani, Y.
 J. Neurochem. 47, 1136-1141, 1987
 A>Title: Vasoactive intestinal peptide gene: Putative mechanism of information storage a
 A/Reference number: IS6494
 A/Accession: IS6494
 A/Status: preliminary; translated from GB/EMBL/DBJ
 A/Molecule type: DNA
 A/Residues: 78-155 <RE2>
 A/Cross-references: UNIPARC:UPI000016B2F8; GB:M32162; NID:G340250; PIDN:AAA61285.1; PID:
 R/Bloom, S.R.; Christofides, N.D.; Delamarier, J.; Buell, G.; Kawashima, E.; Polak, J.M.
 Lancet 2, 1163-1165, 1993
 A>Title: Diarrhoea in vipoma patients associated with cosecretion of a second active pep
 A/Reference number: IS6988; MUID:84066682; PMID:6139527
 A/Accession: IS6988
 A/Status: preliminary; translated from GB/EMBL/DBJ
 A/Molecule type: mRNA
 A/Residues: 50-170 <RE3>
 A/Cross-references: UNIPARC:UPI000016B2F7; GB:M54930; NID:G340247; PIDN:AAA63268.1; PID:
 C/Genetics:
 A/Gene: GDB:VIP
 A/Cross-references: GDB:120490; OMIM:192320
 A/Map position: q26-q27
 A/Introns: 36/2; 77/2; 112/2; 156/2
 C/Superfamily: glucagon
 C/Keywords: amidated carboxyl end; duplication; glycoprotein; hormone; intestine; neuroh
 F/1-20/Domain: signal sequence #status predicted <SIG>
 F/81-122/Product: peptide histidine-valine (PHV-42) #status experimental <PHV>
 F/81-107/Product: peptide histidine-methionine (PHM-27) #status experimental <PHM>
 F/125-152/Product: vasoactive intestinal peptide #status experimental <VIP>
 F/68,133/Binding site: carboxylate (Asn) (covalent) #status predicted
 F/107/Modified site: amidated carboxyl end (Met) (amide in mature form from following gl
 F/152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
 Query Match 96.5%; Score 137; DB 1; Length 170;
 Best Local Similarity 96.4%; Pred. No. 1.2e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Qy 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
 Db 125 HSDAVFTQNYTRLRKQMAVKKYLNSILN 152
 RESULT 9
 VRRV
 N/Contains: peptide histidine-iso-leucine (PHI-27); vasoactive intestinal peptide (VIP)
 C/Species: Rattus norvegicus (Norway rat)
 C/Date: 28-Feb-1986 #sequence revision 30-Jun-1993 #text change 09-Jul-2004
 C/Accession: A60037; B60037; A01548; A28102; A60586; A60587; S09691
 R/Giladi, E.; Shani, Y.; Gozes, I.
 Brain Res. Mol. Brain Res. 7, 261-267, 1990
 A>Title: The complete structure of the rat VIP gene.
 A/Reference number: A60033; MUID:90244869; PMID:2159586
 A/Accession: A60033
 A/Molecule type: DNA
 A/Residues: 1-170 <GIL>

A/Cross-references: UNIPROT:P01283; UNIPARC:UPI0000013884A
 A/Note: the authors translated the codon GAG for residue 67 as Gln
 R/Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
 Brain Res. Mol. Brain Res. 9, 217-231, 1991
 A>Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
 A/Reference number: A60037; MUID:91232388; PMID:11851524
 A/Accession: B60037
 A/Status: not compared with conceptual translation
 A/Molecule type: DNA
 A/Residues: 78-155 <LAM>
 A/Cross-references: UNIPARC:UPI00000173511
 R/Nishizawa, M.; Hayakawa, Y.; Yanaihar, N.; Okamoto, H.
 FEBS Lett. 183, 55-59, 1985
 A>Title: Nucleotide sequence divergence and functional constraint in VIP precursor mRNA
 A/Reference number: A01548; MUID:85154612; PMID:3838518
 A/Accession: A01548
 A/Molecule type: mRNA
 A/Residues: 9-170 <NIS>
 A/Cross-references: UNIPARC:UPI0000170BA3; GB:X02341; NID:G57481; PIDN:CAA26200.1; PID:G:
 A/Experimental source: cerebral cortex
 R/Goetzl, E.J.; Sreedharan, S.P.; Turck, C.W.
 J. Biol. Chem. 263, 9083-9086, 1988
 A>Title: Structurally distinctive vasoactive intestinal peptides from rat basophilic leu
 A/Reference number: A28102; MUID:88243784; PMID:3379062
 A/Accession: A28102
 A/Molecule type: protein
 A/Residues: 134-152 <GOE>
 A/Cross-references: UNIPARC:UPI00000351E4
 A/Note: the source of this novel short form of VIP was rat basophilic leukemia cells
 R/Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Rathe, J.; Robberecht, P.; Christ
 Endocrinology 125, 1296-1302, 1989
 A>Title: Peptide histidine isoleucinamide (PHI) -(1-27)-Gly as a new major form of PHI in
 A/Reference number: A60586; MUID:89338237; PMID:2759027
 A/Accession: A60586
 A/Molecule type: protein
 A/Residues: 81-108 <CAU>
 A/Cross-references: UNIPARC:UPI00000173512
 R/Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Robberecht, P.; Christophe, J.
 Endocrinology 125, 2645-2655, 1989
 A>Title: Variable distribution of three molecular forms of peptide histidine isoleucinam
 A/Reference number: A60587; MUID:90005222; PMID:2792003
 A/Accession: A60587
 A/Molecule type: protein
 A/Residues: 81-122 <CA2>
 A/Cross-references: UNIPARC:UPI00000173513
 R/Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, P.
 Biochim. Biophys. Acta 1038, 355-359, 1990
 A>Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A/Reference number: S09688; MUID:90254163; PMID:2340294
 A/Contents: annotation; comparison of mammalian PHI sequences
 C/Comment: Two active peptides are released from the VIP precursor by cleavage at paired
 C/Genetics:
 A/Introns: 36/2; 77/2; 156/2
 C/Superfamily: glucagon
 C/Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
 F/1-21/Domain: signal sequence #status predicted <SIG>
 F/81-122/Product: PHI-42 #status experimental <PH42>
 F/81-108/Product: PHI-27-Gly #status experimental <PHIG>
 F/81-107/Product: peptide histidine-iso-leucine (PHI-27) #status predicted <PHI>
 F/125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
 F/107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
 F/133/Binding site: carboxylate (Asn) (covalent) #status predicted
 F/152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
 Query Match 96.5%; Score 137; DB 1; Length 170;
 Best Local Similarity 96.4%; Pred. No. 1.2e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Qy 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
 Db 125 HSDAVFTQNYTRLRKQMAVKKYLNSILN 152

RESULT 10
A60037
N;Contains: vasoactive intestinal peptide precursor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C;Accession: A60037; I49386
R;Lampert, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A;Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A;Reference number: A60037; MUID:91232388; PMID:1951524
A;Accession: A60037
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 1-170 <LAM>
A;Cross-references: UNIPROT:P32648; UNIPARC:UPI000002171F
R;Sena, M.; Bravo, D.T.; Von Agoston, D.; Waschek, J.A.
DNA Seq. 5, 25-29, 1994
A;Title: High conservation of upstream regulatory sequences on the human and mouse vasoactive intestinal peptide precursor
A;Reference number: I49386; MUID:95201289; PMID:7894056
A;Accession: I49386
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 1-35 <RES>
A;Cross-references: UNIPARC:UPI000016D189; EMBL:X74297; NID:9895871; PIDN:CAA52350.1; PIDN:CAA52350.1; PIDN:CAA52350.1
C;Comment: Two active peptides are released from the VIP precursor by cleavage at paired basic residues
C;Genetics:
A;Gene: Vip
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
F;1-21/Domain: signal sequence #status predicted <SIG>
F;81-107/Product: PHI-27 #status predicted <PHI>
F;125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F;107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
F;133/Binding site: carboxylate (Asn) (covalent) #status predicted
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl

Query Match 96.5%; Score 137; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 1.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSIL 28
DB 125 HSDAVFTQNYTRLRKQMAVKKYLNSIL 152

RESULT 11
VRGP
N;Contains: vasoactive intestinal peptide precursor - guinea pig (fragments)
C;Species: Cavia porcellus (guinea pig)
C;Date: 31-Mar-1988 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
C;Accession: A26175; S09688; A57082; B60304
R;Du, B.H.; Eng, J.; Hulmes, J.D.; Chang, M.; Pan, Y.C.E.; Yalow, R.S.
Biochem. Biophys. Res. Commun. 128, 1093-1098, 1985
A;Title: Guinea pig has a unique mammalian VIP.
A;Reference number: A26175; MUID:85225523; PMID:4004849
A;Accession: A26175
A;Molecule type: protein
A;Residues: 28-55 <DUB>
A;Cross-references: UNIPROT:P04566; UNIPARC:UPI00000351E2
R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gossens, D.; de Neef, P.; Robberecht, R.
Biochim. Biophys. Acta 1038, 355-359, 1990
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A;Reference number: S09688; MUID:90254163; PMID:2340294
A;Accession: S09688
A;Molecule type: protein
A;Residues: 1-27 <BUS>
A;Cross-references: UNIPARC:UPI0000173516
A;Accession: A57082
A;Molecule type: protein
A;Residues: 28-55 <BU2>
A;Cross-references: UNIPARC:UPI0000173516

C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodil
F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 87.3%; Score 124; DB 1; Length 55;
Best Local Similarity 82.1%; Pred. No. 2.9e-11;
Matches 23; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSIL 28
DB 28 HSDALFTDTYTRLRKQMAVKKYLNSVL 55

RESULT 12
VRCH
N;Contains: vasoactive intestinal peptide precursor - chicken
C;Species: Gallus gallus (chicken)
C;Date: 24-Apr-1984 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C;Accession: S47470; A91425; A90720; A01551
R;Talbot, R.T.; Dunn, I.C.; Wilson, P.W.; Sang, H.M.; Sharp, P.J.
submitted to the EMBL Data Library, August 1994
A;Description: Evidence for alternative splicing of the chicken VIP gene.
A;Reference number: S47470
A;Accession: S47470
A;Molecule type: mRNA
A;Residues: 1-165 <VAL>
A;Cross-references: UNIPROT:P48143; UNIPARC:UPI000002B6C3; EMBL:X80906; NID:G531364; PIDN:G531364
R;Nilsson, A.
FEBS Lett. 60, 322-326, 1975
A;Title: Structure of the vasoactive intestinal octacosapeptide from chicken intestine.
A;Reference number: A91425; MUID:76210823; PMID:1227973
A;Accession: A91425
A;Molecule type: protein
A;Residues: 94-121 <NIL>
A;Cross-references: UNIPARC:UPI00000351E1
R;Bodanszky, M.; Lin, C.Y.; Yiotakis, A.E.; Mutt, V.; Said, S.I.
Bioorg. Chem. 5, 339-350, 1976
A;Title: Vasoactive intestinal peptide (VIP) from chicken. Synthesis and properties of t
A;Reference number: A90720
A;Contents: synthesis
A;Accession: A90720
A;Molecule type: protein
A;Residues: 107-121 <BOD>
A;Cross-references: UNIPARC:UPI0000173517
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; neuropeptide
F;1-25/Domain: signal sequence #status predicted <SIG>
F;94-121/Product: vasoactive intestinal peptide #status experimental <MAT>
F;121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following gl

Query Match 85.9%; Score 122; DB 1; Length 165;
Best Local Similarity 85.2%; Pred. No. 1.8e-10;
Matches 23; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSIL 27
DB 94 HSDAVFTQNYTRFRKQMAVKKYLNSVL 120

RESULT 13
A60303
N;Contains: vasoactive intestinal peptide - smaller spotted catshark
C;Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish)
C;Date: 10-Nov-1992 #sequence_revision 10-Nov-1992 #text_change 09-Jul-2004
C;Accession: A60303; A60314; S07432
R;Dimoline, R.; Thwaites, D.T.; Young, J.; Lee, C.M.; Thorndyke, M.C.
Regul. Pept. 18, 356, 1987
A;Title: A novel family of VIP-like peptides from the dogfish Scyliorhinus canicula.
A;Reference number: A60303
A;Accession: A60303

A;Molecule type: protein
A;Residues: 1-28 <DI1>
A;Cross-references: UNIPROT:P09685; UNIPARC:UPI000013884B
A;Note: this reference is an abstract
R;Dimoline, R.; Thorndyke, M.C.; Young, J.
Regul. Pept. 14, 1-10, 1986
A;Title: Isolation and partial sequence of elasmobranch VIP.
A;Reference number: A60314; MUID:86234323; PMID:3715063
A;Accession: A60314
A;Molecule type: protein
A;Residues: 1-10 <DI2>
A;Cross-references: UNIPARC:UPI000017662D
R;Dimoline, R.; Young, J.; Thwaites, D.F.; Lee, C.M.; Thorndyke, M.C.
Ann. N.Y. Acad. Sci. 527, 621-623, 1988
A;Title: Amino acid sequence of a biologically active vasoactive intestinal peptide from
A;Reference number: S07432
A;Accession: S07432
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-28 <DI3>
A;Cross-references: UNIPARC:UPI000013884B
C;Superfamily: Glucagon
C;Keywords: amidated carboxyl end; duplication; intestine; neuropeptide
F;28/Modified site: amidated carboxyl end (Ala) #status experimental

Query Match 85.2%; Score 121; DB 2; Length 28;
Best Local Similarity 81.5%; Pred. No. 3.9e-11;
Matches 22; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSIL 27
||||| :|||:|||||:|:|
Db 1 HSDAVFTDYSRLRKQMAVKKYLNSLL 27

RESULT 14
A38232
vasoactive intestinal peptide - North American opossum
N;Alternate names: VIP
C;Species: Didelphis virginiana, Didelphis marsupialis virginiana (North American opossum)
C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004
C;Accession: A38232
R;Eng, J.; Yu, J.; Rattan, S.; Yalow, R.S.
Proc. Natl. Acad. Sci. U.S.A. 89, 1809-1811, 1992
A;Title: Isolation and amino acid sequences of opossum vasoactive intestinal polypeptide
A;Reference number: A38232; MUID:92179271; PMID:1542675
A;Accession: A38232
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-28 <ENG>
A;Cross-references: UNIPROT:P39089; UNIPARC:UPI0000138846
A;Note: sequence extracted from NCBI backbone (NCBIP:87215)
C;Superfamily: Glucagon
C;Keywords: duplication; intestine; neuropeptide

Query Match 80.3%; Score 114; DB 2; Length 28;
Best Local Similarity 78.6%; Pred. No. 4.1e-10;
Matches 22; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
||||| :|||:|||||:|:|
Db 1 HSDAVFTDSYTRLRKQMAVKKYLDSILN 28

RESULT 15
JQ0361
vasoactive intestinal peptide - Atlantic cod (fragment)
C;Species: Gadus morhua (Atlantic cod)
C;Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 09-Jul-2004
C;Accession: JQ0361
R;Thwaites, D.F.; Young, J.; Thorndyke, M.C.; Dimoline, R.
Regul. Pept. 21, 436, 1988
A;Title: Isolation and characterisation of two teleost VIP's.
A;Reference number: JQ0361

A;Accession: JQ0361
A;Molecule type: protein
A;Residues: 1-25 <THM>
A;Cross-references: UNIPROT:P09684; UNIPARC:UPI0000138847
C;Superfamily: glucagon
C;Keywords: duplication; intestine; neuropeptide

Query Match 78.2%; Score 111; DB 2; Length 25;
Best Local Similarity 84.0%; Pred. No. 1e-09;
Matches 21; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNS 25
||||| :|||:|||||:|:|
Db 1 HSDAVFTDYSRLRKQMAVKKYLNS 25

Search completed: January 25, 2006, 15:20:37
Job time : 13.25 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:54:02 ; Search time 76 Seconds
(without alignments)
259.931 Million cell updates/sec

Title: US-10-626-719-4
Perfect score: 142
Sequence: 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Uniprot_05.80.*
1: uniprot_sprot.*
2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	137	96.5	28	1 VIP_CANFA	P63289 canis famil
2	137	96.5	28	1 VIP_CAPHI	P63290 capra hircu
3	137	96.5	28	1 VIP_MACMU	P84488 macaca mula
4	137	96.5	28	1 VIP_SHEEP	P63291 ovis aries
5	137	96.5	72	1 VIP_PIG	P01284 sus scrofa
6	137	96.5	72	1 VIP_RABIT	P32849 oryctolagus
7	137	96.5	118	2 Q5TCY7 HUMAN	Q5tcy7 homo sapien
8	137	96.5	145	2 Q7MZY9 MACFA	Q7mzy9 macaca fasc
9	137	96.5	153	2 Q7TSR4_MURI	Q7tsr4 arvicanthis
10	137	96.5	169	2 Q5TCY8 HUMAN	Q5tcy8 homo sapien
11	137	96.5	170	1 VIP_BOVIN	P81401 bos taurus
12	137	96.5	170	1 VIP_HUMAN	P01282 homo sapien
13	137	96.5	170	1 VIP_MOUSE	P32648 mus musculus
14	137	96.5	170	1 VIP_RAT	P01283 rattus norv
15	137	96.5	170	2 Q5TCY9 HUMAN	Q5tcy9 homo sapien
16	137	96.5	171	2 Q9D2Z7_MOUSE	Q9d2z7 mus musculus
17	124	87.3	72	1 VIP_CAVPO	P04566 cavia porce
18	122	85.9	28	1 VIP_ALLMI	P48142 alligator m
19	122	85.9	28	1 VIP_RANRI	P81016 rana ridibu
20	122	85.9	70	2 Q4TZX3 ANAPL	Q4tzx3 anas platyr
21	122	85.9	86	2 Q4TZY9_GAVES	Q4tzy9 anser anser
22	122	85.9	200	1 VIP_CHICK	P48143 gallus gall
23	122	85.9	200	1 VIP_MEIGA	P45644 meleagris g
24	122	85.9	202	2 Q7ZTG8_XENLA	Q7zyg8 xenopus lae
25	121	85.2	28	1 VIP_SCYCA	P09685 scyllorhinu
26	121	85.2	28	1 Q9PRI9_AMICA	Q9pri9 amia calva
27	121	85.2	147	2 Q4SQN2_TETNG	Q4sqn2 tetraodon n
28	117	82.4	28	2 Q9PRN8_CARAU	Q9prn8 carassius a
29	114	80.3	28	1 VIP_DIDMA	P39089 didelphis m
30	111	78.2	25	1 VIP_GADMO	P09684 gadus morhu
31	104	73.2	38	2 Q75W85_MISAN	Q75w85 misgurnus a

32	101	71.1	172	2	Q9DE29_BRARE	Q9de29 brachydanio
33	101	71.1	199	2	Q5XJ29_BRARE	Q5xj29 brachydanio
34	100	70.4	38	2	Q75W94_HALRO	Q75w94 halocynthia
35	100	70.4	38	2	Q8IU36_PERAM	Q8iu36 periplaneta
36	100	70.4	38	2	Q8IU37_SEPLE	Q8iu37 sepioteuthi
37	100	70.4	38	2	Q8IU38_HYDMA	Q8iu38 hydra magni
38	100	70.4	38	2	Q8IU39_DUGJA	Q8iu39 dugesia jap
39	100	70.4	38	2	Q75W87_ONCMY	Q75w87 oncorhynch
40	100	70.4	38	2	Q75W90_9TELE	Q75w90 sardinops m
41	100	70.4	38	2	Q75W92_9PERC	Q75w92 stephanolep
42	100	70.4	38	2	Q8AYP4_ACISC	Q8ayp4 acipenser s
43	100	70.4	38	2	Q8AYP5_TRAJP	Q8ayp5 trachurus j
44	100	70.4	62	2	Q53B12_9PRIM	Q53b12 gorilla gor
45	100	70.4	62	2	Q53B13_PONPY	Q53b13 pongo pygma

ALIGNMENTS

RESULT 1
ID VIP_CANFA STANDARD; PRT; 28 AA.
AC P63289: P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name=VIP;
OS Canis familiaris (Dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;
OC Canis.
OX NCBI_TaxID=9615;
RN [1]_TaxID=9615;
RP PROTEIN SEQUENCE.
RX MEDLINE=86313167; PubMed=3748946; DOI=10.1016/0196-9781(86)90158-0;
RA Eng J., Du B.-H., Raufman J.-P., Yalow R.S.;
RT "Purification and amino acid sequences of dog, goat and guinea pig
RT VIPs.";
RL Peptides 7 Suppl. 1:17-20(1986).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC PIR; A60304; A60304.
CC HSPB; P18509; IGEA.
CC Ensembl; ENSCAPG00000000538; Canis familiaris.
CC InterPro; IPR000532; Glucagon.
CC Pfam; PF00123; Hormone-2; 1.
CC PRINTS; PR00275; GLUCAGON.
CC SMART; SM00070; GLUCA; 1.
CC PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD_RES 28 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313PFB573F6F3F CRC64;

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.8e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28

DB 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28

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RT "Rhesus monkey gastroenteropancreatic hormones: relationship to human
RL sequences.";
CC Regul. Pept. 32:39-45(1991).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
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CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR PIR; B60071; B60071.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD_RES 28 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313FBS73FF6F3F CRC64;

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.8e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 4
VIP SHEEP
ID VIP SHEEP STANDARD; PRT; 28 AA.
AC P63291; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name=VIP;
OS Ovis aries (Sheep).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Ovis.
OX NCBI_TaxID=9940;
RN [1]
RP PROTEIN SEQUENCE.
RC TISSUE=Brain;
RX MEDLINE=91045331; PubMed=2235680; DOI=10.1016/0196-9781(90)90184-7;
RA Gafvelin G.;
RT "Isolation and primary structure of VIP from sheep brain.";
RL Peptides 11:703-706(1990).
RN [2]
RP PROTEIN SEQUENCE.
RC TISSUE=Small intestine;
RX MEDLINE=91239834; PubMed=2034821; DOI=10.1016/0167-0115(91)90044-H;
RA Bounjoua Y., Vandermeers A., Robberecht P., Vandermeers-Piret M.C.,
RA Christophe J.;
RT "Purification and amino acid sequence of vasoactive intestinal
RT peptide, peptide histidine isoleucineamide and secretin from the ovine
RT small intestine.";
RL Regul. Pept. 32:169-179(1991).
RN [3]
RP PROTEIN SEQUENCE.
RC TISSUE=Hypothalamus, and Intestine;
RX PubMed=1574609; DOI=10.1016/0167-0115(92)90053-W;
RA Miyata A., Jiang L., Stibbs H.H., Arimura A.;
RT "Chemical characterization of vasoactive intestinal polypeptide-like
RT immunoreactivity in ovine hypothalamus and intestine.";

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RL Regul. Pept. 38:145-154(1992).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC removed.
CC -----
DR PIR; B60072; VRSH.
DR HSSP; P18509; IGEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD RES 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.8e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKYLNLSLN 28
Db 1 HSDAVFTDNYTLRKQMAVKYLNLSLN 28

RESULT 5
ID_VIP_PIG STANDARD; PRT; 72 AA.
AC P01284; Q9TRN0;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
DE (Vasoactive intestinal polypeptide)] (Fragment).
GN Names=VIP;
OS Sus scrofa (Pig).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
OC Sus.
OX NCBI_TaxID=9823;
RN [1]
RP PROTEIN SEQUENCE OF 1-27.
RX MEDLINE=82082498; PubMed=6947244;
RA Tatenoto K., Mutt V.;
RT "Isolation and characterization of the intestinal peptide porcine PHI
RL (PHI-27), a new member of the glucagon-secretin family.";
RL Proc. Natl. Acad. Sci. U.S.A. 78:6603-6607(1981).
RN [2]
RP PROTEIN SEQUENCE OF 1-24.
RC TISSUE=Duodenum;
RX MEDLINE=93038640; PubMed=1329741;
RA Ichiki Y., Kitamura K., Kangawa K., Kawamoto M., Matsuo H., Eto T.;
RT "Organ distribution and characterization of porcine peptides (VIP,
RT CGRP and PHI) that increase cAMP in rat platelets.";
RL Biochem. Biophys. Res. Commun. 187:1587-1593(1992).
RN [3]
RP PROTEIN SEQUENCE OF 28-58.
RX MEDLINE=88335763; PubMed=2843830; DOI=10.1016/0196-9781(88)90149-0;
RA Gavellin G., Andersson M., Dimoline R., Jorvall H., Mutt V.;
RT "Isolation and characterization of a variant form of vasoactive
RL Peptides 9:469-474(1988).
RN [4]
RP PROTEIN SEQUENCE OF 45-72.

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RX MEDLINE=74167323; PubMed=4829446;
RA Mutt V., Said S.I.;
RT "Structure of the porcine vasoactive intestinal octacosapeptide. The
RT amino-acid sequence. Use of kallikrein in its determination.";
RL Eur. J. Biochem. 42:581-589(1974).
RN [5]
RP SYNTHESIS OF VIP.
RX MEDLINE=74308014; PubMed=4854585;
RA Bodanszky M., Klausner Y.S., Lin C.Y., Mutt V., Said S.I.;
RT "Synthesis of the vasoactive intestinal peptide (VIP).";
RL J. Am. Chem. Soc. 96:4973-4978(1974).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC use as long as its content is in no way modified and this statement is not
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CC -----
DR PIR; A01549; VRPG.
DR HSSP; P18509; IGEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
FT PEPTIDE 1 27 Intestinal peptide PHI-27.
FT PEPTIDE 45 72 Vasoactive intestinal peptide.
FT MOD RES 27 27 Isoleucine amide.
FT MOD RES 72 72 Asparagine amide.
FT NON_TER 1 1
FT NON_TER 72 72
SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;

Query Match 96.5%; Score 137; DB 1; Length 72;
Best Local Similarity 96.4%; Pred. No. 1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKYLNLSLN 28
Db 45 HSDAVFTDNYTLRKQMAVKYLNLSLN 72

RESULT 6
ID_VIP_RABIT STANDARD; PRT; 72 AA.
AC P32649;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
DE (Vasoactive intestinal polypeptide)] (Fragment).
GN Name=VIP;
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
OC Oryctolagus.
OX NCBI_TaxID=9986;
RN [1]
RP PROTEIN SEQUENCE.
RC TISSUE=Small intestine;
RX MEDLINE=90259845; PubMed=2342988; DOI=10.1016/0196-9781(90)90120-T;
RA Gossen D., Buscail L., Cauvin A., Gourlet P., de Neef P., Rathe J.,
RA Robberecht P., Vandermeers-Piret M.C., Vandermeers A., Christophe J.;

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RT "Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine";

RL Peptides 11:123-128(1990).

CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.

CC -!- FUNCTION: PHI also causes vasodilation.

CC -!- SUBCELLULAR LOCATION: Secreted.

CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.

CC -!- SIMILARITY: Belongs to the glucagon family.

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CC HSSP; P18509; 1GEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone 2; 2.

DR PRINTS; PR00275; GLUCAGON.

DR PROSITE; PS00260; GLUCAGON; 2.

KW Amidation; Cleavage on pair of basic residues; Glucagon family; Hormone.

KW Direct protein sequencing; Glucagon peptide PHI-27.

FT PPTIDE 1 27

FT PPTIDE 45 27

FT PPTIDE 27 27

FT MOD_RES 72 72

FT MOD_RES 72 72

FT MOD_RES 72 72

FT NON_TER 1 1

FT NON_TER 72 72

SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;

Query Match 96.5%; Score 137; DB 1; Length 72;

Best Local Similarity 96.4%; Pred. No. 1e-12; Indels 0; Gaps 0;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTRLRKQMAVKYLSILN 28

Db 45 HSDAVFTDNYTRLRKQMAVKYLSILN 72

RESULT 7

Q5TCY7 HUMAN PRELIMINARY; PRT; 118 AA.

AC Q5TCY7;

DT 01-FEB-2005 (TrEMBLrel. 29, Created)

DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)

DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)

DE Vasoactive intestinal peptide (Fragment).

OS Name=VIP; ORFNames=RP4-546X19.1-003;

OS Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;

OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini; Hominidae;

OC Homo.

OX NCBI_TaxID=9606;

RN [1]

RP NUCLEOTIDE SEQUENCE.

RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.

DR EMBL; AL133356; CAI21766.1; -; Genomic DNA.

DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone 2; 2.

DR PRINTS; PR00275; GLUCAGON.

DR SMART; SM00070; GLUCA; 2.

DR PROSITE; PS00260; GLUCAGON; 2.

FT NON_TER 1 1

SQ SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;

Query Match 96.5%; Score 137; DB 2; Length 118;

Best Local Similarity 96.4%; Pred. No. 1.8e-12; Indels 1; Gaps 0;

Matches 27; Conservative 0; Mismatches 1; Indels 1; Gaps 0;

Qy 1 HSDAVFTQNYTRLRKQMAVKYLSILN 28

Db 45 HSDAVFTDNYTRLRKQMAVKYLSILN 72

RESULT 8

Q7M2Y9 MACFA PRELIMINARY; PRT; 145 AA.

AC Q7M2Y9;

DT 01-MAR-2004 (TrEMBLrel. 26, Created)

DT 01-MAR-2004 (TrEMBLrel. 26, Last sequence update)

DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)

DE Vasoactive intestinal peptide precursor (Fragment).

OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).

OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;

OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini;

OC Cercopitheidae; Cercopithecinæ; Macaca.

OX NCBI_TaxID=9541;

RN [1]

RP NUCLEOTIDE SEQUENCE.

RX MEDLINE=91203476; PubMed=1850073; DOI=10.1016/0169-328X(91)90145-N; Benson D.L., Isackson P.J., Jones E.G.;

RA "In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey and rat neocortex."

RL Brain Res. Mol. Brain Res. 9:169-174 (1991).

DR PIR; A60038; A60038.

DR HSSP; P18509; 1GEA.

DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone 2; 2.

DR PRINTS; PR00275; GLUCAGON.

DR PROSITE; PS00260; GLUCAGON; 2.

FT NON_TER 1 1

FT NON_TER 145 145

SQ SEQUENCE 145 AA; 16324 MW; 1ABE5D98D853FE5C CRC64;

Query Match 96.5%; Score 137; DB 2; Length 145;

Best Local Similarity 96.4%; Pred. No. 2.2e-12; Indels 1; Gaps 0;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTRLRKQMAVKYLSILN 28

Db 100 HSDAVFTDNYTRLRKQMAVKYLSILN 127

RESULT 9

Q7TSR4_9MURI PRELIMINARY; PRT; 153 AA.

AC Q7TSR4_9MURI;

DT 01-OCT-2003 (TrEMBLrel. 25, Created)

DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)

DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)

DE Vasoactive intestinal polypeptide (Fragment).

OS Arvicanthus ansorgei.

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Euthera; Euarchontoglires; Glires; Rodentia; Sciurognathi;

OC Muridae; Murinae; Arvicanthis.

OX NCBI_TaxID=204747;

RN [1]

RP NUCLEOTIDE SEQUENCE.

RA Dardente H., Menet J.S., Tournier B.B., Challet E., Pevet P., Mason-Pevet M.;

RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.

DR EMBL; AY225375; AAP15167.1; -; mRNA.

DR HSSP; P18509; 1GEA.

DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone 2; 2.

DR PRINTS; PR00275; GLUCAGON.

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DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON TER 1
SQ SEQUENCE 153 AA; 17171 MW; 9C15095D6E147A15 CRC64;

Query Match 96.5%; Score 137; DB 2; Length 153;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db 108 HSDAVFTDNYTRLRKQMAVKKYLNSILN 135

RESULT 10
Q5TCY8_HUMAN
ID Q5TCY8_HUMAN PRELIMINARY; PRT; 169 AA.
AC Q5TCY8;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-002;
OS Homo sapiens (Human)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CA121765.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 169 AA; 19081 MW; F325BDFEF47132C3 CRC64;

Query Match 96.5%; Score 137; DB 2; Length 169;
Best Local Similarity 96.4%; Pred. No. 2.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db 124 HSDAVFTDNYTRLRKQMAVKKYLNSILN 151

RESULT 11
VIP_BOVIN
ID VIP_BOVIN STANDARD; PRT; 170 AA.
AC P81401; Q8MI77;
DT 15-DEC-1998 (Rel. 37, Created)
DT 25-OCT-2004 (Rel. 45, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide histidine isoleucinamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=2202342; PubMed=12097482;
RA Hamelink C., Lee H.-W., Chen Y., Grimaldi M., Eiden L.E.;
RT "Coincident elevation of cAMP and calcium influx by PACAP-27 synergistically regulates vasoactive intestinal polypeptide gene transcription through a novel PKA-independent signaling pathway.";
RL J. Neurosci. 22:5310-5320(2002).
RN [2]
RP PROTEIN SEQUENCE OF 81-107.
RC TISSUE=Ductenium;

RX MEDLINE=85027215; PubMed=6548446;
RA Carlquist M., Kaiser R., Tatemoto K., Joernvall H., Mutt V.;
RT "A novel form of the polypeptide PHI isolated in high yield from bovine upper intestine. Relationships to other peptides of the glucagon-secretin family.";
RL Eur. J. Biochem. 144:243-247(1984).
RN [3]
RP PROTEIN SEQUENCE OF 125-152.
RC TISSUE=Intestine;
RX MEDLINE=80092152; PubMed=520589; DOI=10.1016/0014-5793(79)80587-6;
RA Carlquist M., Mutt V., Joernvall H.;
RT "Isolation and characterization of bovine vasoactive intestinal peptide (VIP).";
RL FEBS Lett. 108:457-460(1979).
CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -1- FUNCTION: PHI also causes vasodilation.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.
CC -1- SIMILARITY: Belongs to the glucagon family.
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CC -----
DR EMBL; AF503910; AM28152.1; -; mRNA.
DR HSSP; P18509; IGEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 25 Potential.
FT PROPEP 26 79 Intestinal peptide PHI-27.
FT PEPTIDE 81 107 Vasoactive intestinal peptide.
FT PROPEP 111 122 Isoleucine amide (G-108 provides amide group).
FT PEPTIDE 125 152 Asparagine amide (G-153 provides amide group).
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT MOD_RES 152 152
SQ SEQUENCE 170 AA; 19165 MW; 9C6A6049AF7BFF81 CRC64;

Query Match 96.5%; Score 137; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTRLRKQMAVKKYLNSILN 152

RESULT 12
VIP_HUMAN
ID VIP_HUMAN STANDARD; PRT; 170 AA.
AC P01282; Q96OK3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42; Intestinal peptide PHM-27 (Peptide histidine methioninamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

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OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominoidea;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=83271523; PubMed=6571696;
RA Itoh N., Obata K.-I., Yanaiharu N., Okamoto H.;
RT "Human preprovasoactive intestinal polypeptide contains a novel PHI-
RT 27-like peptide, PHM-27.";
RL Nature 304:547-549 (1983).
RN [2]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=88267775; PubMed=2839091;
RA Yamagami T., Onisawa K., Nishizawa M., Inoue C., Gotoh E.,
RT "Complete nucleotide sequence of human vasoactive intestinal
RT peptide/PHM-27 gene and its inducible promoter.";
RL Ann. N. Y. Acad. Sci. 527:87-102 (1988).
RN [3]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=86004065; PubMed=3899557;
RA Tsukada T., Horovitch S.J., Montminy M.R., Mandel G., Goodman R.H.;
RT "Structure of the human vasoactive intestinal polypeptide gene.";
RL DNA 4:293-300 (1985).
RN [4]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=87092456; PubMed=3025882;
RA Linder S., Barkhem T., Norberg A., Persson H., Schalling M.,
RT Hoeckfelt T., Magnusson G.;
RT "Structure and expression of the gene encoding the vasoactive
RT intestinal peptide precursor.";
RL Proc. Natl. Acad. Sci. U.S.A. 84:605-609 (1987).
RN [5]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=86016352; PubMed=2995945; DOI=10.1016/0196-9781(85)90016-6;
RA Delamarier J.F., Buell G.N., Kawashima E., Polak J.M., Bloom S.R.;
RT "Vasoactive intestinal peptide: expression of the prohormone in
RT bacterial cells.";
RL Peptides 6:95-102 (1985).
RN [6]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RX TISSUE=Prostate;
MEDLINE=22389257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strauberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RT Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heich F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Uesdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaby S.J.,
RA Bosak S.A., McRwan P.J., McKernan K.J., Malek J.A., Qunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Ketterman M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko V., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smallos D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
RN [7]
RP NUCLEOTIDE SEQUENCE OF 8-170.
RX MEDLINE=86313155; PubMed=3748844; DOI=10.1016/0196-9781(86)90156-7;
RA Gozes I., Bodener M., Shani Y., Fridkin M.;
RT "Structure and expression of the vasoactive intestinal peptide (VIP)
RT gene in a human tumor.";
RL Peptides 7:1-6 (1986).
RN [8]
RP NUCLEOTIDE SEQUENCE OF 50-170.
RX TISSUE=Pancratic carcinoma;
RN [9]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=87140054; PubMed=2434617;
RA Gozes I., Giladi E., Shani Y.;
RT "Vasoactive intestinal peptide gene: putative mechanism of information
RT storage at the RNA level.";
RL J. Neurochem. 47:1136-1141 (1987).
RN [10]
RP PROTEIN SEQUENCE OF 81-122.
RX MEDLINE=88007645; PubMed=3654650;
RA Yiangou Y., di Marzo V., Spokes R.A., Panico M., Morris H.R.,
RA Bloom S.R.;
RT "Isolation, characterization, and pharmacological actions of peptide
RT histidine valine 42, a novel prepro-vasoactive intestinal peptide-
RT derived peptide.";
RL J. Biol. Chem. 262:14010-14013 (1987).
RN [11]
RP PROTEIN SEQUENCE OF 127-152.
RX TISSUE=Pheochromocytoma;
MEDLINE=92287083; PubMed=1318039;
RA Kitamura K., Kangawa K., Kawamoto M., Ichiki Y., Matsuo H., Eto T.;
RT "Isolation and characterization of peptides which act on rat
RT platelets, from a pheochromocytoma.";
RL Biochem. Biophys. Res. Commun. 185:134-141 (1992).
RN [12]
RP STRUCTURE BY NMR OF VIP.
RX MEDLINE=91322343; PubMed=1863695;
RA Theriault Y., Boulanger Y., St Pierre S.;
RT "Structural determination of the vasoactive intestinal peptide by two-
RT dimensional H-NMR spectroscopy.";
RL Biopolymers 31:459-464 (1991).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHM and PHV also cause vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC EMBL; L00157; AAA61289.1; -; Genomic DNA.
CC EMBL; L00154; AAA61289.1; JOINED; Genomic DNA.
CC EMBL; L00155; AAA61289.1; JOINED; Genomic DNA.
CC EMBL; L00156; AAA61289.1; JOINED; Genomic DNA.
CC EMBL; M30027; AAA69515.1; -; Genomic DNA.
CC EMBL; M1553; AAA61284.1; -; Genomic DNA.
CC EMBL; M1549; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M1550; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M1551; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M1552; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M14623; AAA61288.1; -; Genomic DNA.
CC EMBL; M14619; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M14620; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M14621; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M14622; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M36610; AAA61286.1; -; Genomic DNA.
CC EMBL; M36606; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; M36607; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; M36608; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; M36609; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; BC009794; AAH09794.1; -; mRNA.
CC EMBL; M36634; AAA61287.1; -; mRNA.

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DR EMBL; M54930; AAA63268.1; -; mRNA.
DR EMBL; M32162; AAA61285.1; -; Genomic DNA.
DR EMBL; M31645; AAA61285.1; JOINED; Genomic_DNA.
DR PIR; A23296; VRHU.
DR HSP; P18509; IGEA.
DR Ensembl; ENSG00000146469; Homo sapiens.
DR HGNC; HGNC:12693; VIP.
DR H-INVD; HIX0006306; -.
DR MIM; 192320; -.
DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
DR GO; GO:0007589; P:fluid secretion; TAS.
DR GO; GO:0007186; P:G-protein coupled receptor protein signaling...; TAS.
DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 20 Potential.
FT PROPEP 21 79
FT PEPTIDE 81 122 Intestinal peptide PHI-42.
FT PEPTIDE 81 107 Intestinal peptide PHM-27.
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107 Methionine amide (G-108 provides amide group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group).
FT CONFLICT 96 97 OL -> PP (in Ref. 7).
FT CONFLICT 113 113 Missing (in Ref. 6).
FT CONFLICT 116 116 S -> L (in Ref. 4).
FT CONFLICT 136 136 R -> G (in Ref. 4).
SQ SEQUENCE 170 AA; 19166 MW; 93EC0177F89508FD CRC64;

Query Match 96.5%; Score 137; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

RESULT 13
VIP_MOUSE STANDARD; PRT; 170 AA.
AC P32648;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
DE polypeptide]].
GN Names=Vip;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lampert E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 1-36.
RC STRAIN=C57BL/6; TISSUE=Spleen;
RX MEDLINE=95201289; PubMed=7894056;
RA Sena M., Bravo D.T., Agoston D., Waschek J.A.;

```

"High conservation of upstream regulatory sequences on the human and mouse vasoactive intestinal peptide (VIP) genes.";

RNA Seq. 5:25-29 (1994).

-!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.

-!- FUNCTION: PHM also causes vasodilation.

-!- SUBCELLULAR LOCATION: Secreted.

-!- SIMILARITY: Belongs to the glucagon family.

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EMBL; X74297; CAA52350.1; -; Genomic_DNA.

PIR; A60037; A60037.

HSP; P18509; IGEA.

Ensembl; ENSMUSG00000019772; Mus musculus.

MGI; MGI:98933; Vip.

GO; GO:0005615; C:extracellular space; TAS.

InterPro; IPR000532; Glucagon.

Pfam; PF00123; Hormone 2; 2.

PRINTS; PR00275; GLUCAGON.

PROSITE; PS00260; GLUCAGON; 2.

KW Amidation; Cleavage on pair of basic residues; Glucagon family;

KW Glycoprotein; Hormone; Signal.

FT SIGNAL 1 21 By similarity.

FT PROPEP 22 79

FT PEPTIDE 81 122 Intestinal peptide PHI-42 (By similarity).

FT PEPTIDE 81 107 Intestinal peptide PHI-27.

FT PEPTIDE 125 152 Vasoactive intestinal peptide.

FT PROPEP 156 170

FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide group).

FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group).

FT CARBOHYD 133 133 N-linked (GlcNAc...) (Potential).

FT SEQUENCE 170 AA; 19049 MW; 0164C831F8F5C73D CRC64;

Query Match 96.5%; Score 137; DB 1; Length 170;

Best Local Similarity 96.4%; Pred. No. 2.6e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28

DB 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

RESULT 14

VIP_RAT STANDARD; PRT; 170 AA.

ID VIP_RAT

AC P01283;

DT 21-JUL-1986 (Rel. 01, Created)

DT 01-OCT-1993 (Rel. 27, Last sequence update)

DT 13-SEP-2005 (Rel. 48, Last annotation update)

DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;

DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);

DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].

DE polypeptide]].

GN Name=Vip;

OS Rattus norvegicus (Rat).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;

OC Muridae; Murinae; Rattus.

OX NCBI_TaxID=10116;

RN [1]

RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].

RX MEDLINE=90244869; PubMed=2159586; DOI=10.1016/0169-328X(90)90036-D;

RA Giladi E., Shani Y., Gozes I.;

RT "The complete structure of the rat VIP gene.";

Brain Res. Mol. Brain Res. 7:261-267(1990).

[2]

NUCLEOTIDE SEQUENCE OF 9-170.

TISSUE=Brain cortex;

MEDLINE=85154612; PubMed=3838518; DOI=10.1016/0014-5793(85)80953-4;

Nishizawa M., Hayakawa Y., Yanaihara N., Okamoto H.;

"Nucleotide sequence divergence and functional constraint in VIP precursor mRNA evolution between human and rat.;"

FEBS Lett. 183:55-59(1985).

[3]

NUCLEOTIDE SEQUENCE OF 78-155.

MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-1;

Lamperti E.D., Rosen K.M., Villa-Komaroff L.;

"Characterization of the gene and messages for vasoactive intestinal polypeptide (VIP) in rat and mouse.;"

Brain Res. Mol. Brain Res. 9:217-231(1991).

[4]

PROTEIN SEQUENCE OF 134-152.

MEDLINE=88243784; PubMed=3379062;

Goetzl E.J., Sreedharan S.P., Turk C.W.;

"Structurally distinctive vasoactive intestinal peptides from rat basophilic leukemia cells.;"

J. Biol. Chem. 263:9083-9086(1988).

-1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycohemolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.

-1- FUNCTION: PHI also causes vasodilation.

-1- FUNCTION: PHI also causes vasodilation.

-1- SIMILARITY: Belongs to the glucagon family.

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EMBL; X02341; CAA26200.1; -; mRNA.

PIR; A60053; VRRT.

HSP; P18509; IGEA.

Ensembl; ENSRNOG00000018808; Rattus norvegicus.

RGD; 621647; Vip.

GO; GO:0042311; P:vasodilation; NAS.

InterPro; IPR000532; Glucagon.

Pfam; PF00123; Hormone_2; 2.

PRINTS; PR00275; GLUCAGON.

PROSITE; PS00260; GLUCAGON; 2.

Amidation; Cleavage on pair of basic residues;

Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;

Signal.

SIGNAL

1 21

PROPEP 22 79

PEPTIDE 81 122

Intestinal peptide PHV-42 (By similarity).

PEPTIDE 81 107

Intestinal peptide PHI-27.

PEPTIDE 125 152

Vasoactive intestinal peptide.

PROPEP 156 170

PEPTIDE 156 170

Isoleucine amide (G-108 provides amide group).

MOD_RES 107 107

MOD_RES 152 152

Asparagine amide (G-153 provides amide group).

MOD_RES 152 152

Asparagine amide (G-153 provides amide group).

CARBOHYD 68 68

N-linked (GlcNAc. . .) (Potential).

CARBOHYD 133 133

N-linked (GlcNAc. . .) (Potential).

SEQUENCE 170 AA; 19079 MW; 202AE82EBBD190B CRC64;

Query Match 96.5%; Score 137; DB 1; Length 170;

Best Local Similarity 96.4%; Pred. No. 2.6e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKYKLSILN 28

|||||

DB 125 HSDAVFTDNYTLRKQMAVKYKLSILN 152

us-10-626-719-4.rup

Page 8

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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-5
Perfect score: 142
Sequence: 1 HSDAVFTRNRYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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1: Geneseqp1980s:*
2: Geneseqp1990s:*
3: Geneseqp2000s:*
4: Geneseqp2001s:*
5: Geneseqp2002s:*
6: Geneseqp2003as:*
7: Geneseqp2003bs:*
8: Geneseqp2004s:*
9: Geneseqp2005s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	138	97.2	28	5	ABG94141 Human vas
2	137	96.5	28	5	ABG94140 Human vas
3	136	95.8	28	5	ABG94138 Human vas
4	136	95.8	28	5	ABG94139 Human vas
5	135	95.1	28	1	AAP101172 VIP. 3/20
6	135	95.1	28	1	AAP71039 Sequence
7	135	95.1	28	2	AAR34943 Porcine v
8	135	95.1	28	2	AAR40272 Native VI
9	135	95.1	28	2	AAR53111 Bronchodi
10	135	95.1	28	2	AAR53109 Bronchodi
11	135	95.1	28	2	AAR53110 Bronchodi
12	135	95.1	28	2	AAR87092 Vasoactiv
13	135	95.1	28	2	AAR83785 VIP. 2/19
14	135	95.1	28	2	AAR97810 Vasoactiv
15	135	95.1	28	2	AAR93023 Human glu
16	135	95.1	28	2	AAR5188 Vasoactiv
17	135	95.1	28	2	AAW06120 Human VIP
18	135	95.1	28	2	AAW06119 Mouse VIP
19	135	95.1	28	2	AAW06114 Rabbit VI
20	135	95.1	28	2	AAW06113 Macaque V
21	135	95.1	28	2	AAW06121 Pig VIP p
22	135	95.1	28	2	AAW06122 Goat VIP
23	135	95.1	28	2	AAW06115 Dog VIP p
24	135	95.1	28	2	AAW06112 Sheep VIP

25	135	95.1	28	2	AAW37791 Vasoactiv
26	135	95.1	28	2	AAW71677 Vasoactiv
27	135	95.1	28	2	AAV30769 Vasoactiv
28	135	95.1	28	2	AAV44196 Human vas
29	135	95.1	28	3	AAV94560 Vasoactiv
30	135	95.1	28	4	AAV85707 Peptide h
31	135	95.1	28	4	AAV85710 Peptide h
32	135	95.1	28	4	AAV91279 Vasoactiv
33	135	95.1	28	4	AAV91278 Vasoactiv
34	135	95.1	28	4	AAV12028 Porcine v
35	135	95.1	28	4	AAV37111 Human vas
36	135	95.1	28	4	AAV70459 Vasoactiv
37	135	95.1	28	4	AAV50845 Human pro
38	135	95.1	28	4	AAU09653 Porcine i
39	135	95.1	28	4	AAU45614 Native v
40	135	95.1	28	5	AAE19604 Human ste
41	135	95.1	28	5	AAE19627 Human vas
42	135	95.1	28	5	AAE19603 Human vas
43	135	95.1	28	5	ABB06677 Mammalian
44	135	95.1	28	5	AAU85989 Modified
45	135	95.1	28	5	AAU97783 Tumour sp

ALIGNMENTS

RESULT 1	
ABG94141	
ID	ABG94141 standard; peptide; 28 AA.
XX	XX
AC	ABG94141;
XX	XX
DT	27-NOV-2002 (first entry)
XX	XX
DE	Human vasoactive intestinal polypeptide (VIP) analogue #189.
XX	XX
KW	Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
KW	vagina; vaginal atrophy; pain; intercourse; vaginal itching;
KW	vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
KW	sexual aversion; menopausal state; post-menopausal state; sexual desire;
KW	sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
KW	peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
KW	vaginal muscle tone; vaginal lubrication; collagen misdeposition.
XX	XX
OS	Unidentified.
XX	XX
PN	US2002099003-A1.
XX	XX
PD	25-JUL-2002.
XX	XX
PF	13-AUG-2001; 2001US-00929818.
XX	XX
PR	28-OCT-1997; 97US-00959057.
PR	28-OCT-1997; 97US-00959064.
PR	27-OCT-1998; 98US-00181316.
PR	04-FEB-2000; 2000US-00498522.
XX	XX
PA	(WILS/) WILSON L F.
PA	(PLAC/) PLACE V A.
XX	XX
PI	Wilson LF, Place VA;
XX	XX
DR	WPI; 2002-697729/75.
XX	XX
PT	Treating sexual dysfunction in females comprises administering vasoactive
PT	intestinal polypeptide or against to vagina and/or vulvar region.
XX	XX
PS	Claim 19; Page; 19pp; English.
XX	XX
CC	The invention relates to a method for treating sexual dysfunction in
CC	females comprising administering a formulation comprising a vasoactive
CC	agent comprising a vasoactive intestinal polypeptide and/or agonist to
CC	the vagina and/or vulvar region. The method is used for preventing

CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952

XX Sequence 28 AA;
 SQ Query Match 97.2%; Score 138; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 4.8e-11;
 Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTNNYTRLRKQMAVKKYLNSILN 28
 Db 1 HSDAVFTNNYTRLRKQMAVKKYLNSILN 28

RESULT 2
 ABG94140
 ID ABG94140 standard; peptide; 28 AA.
 XX AC ABG94140;
 XX DT 27-NOV-2002 (first entry)
 XX DE Human vasoactive intestinal polypeptide (VIP) analogue #188.

XX Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
 KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
 KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
 KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
 KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
 KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
 KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.

XX Unidentified.
 XX OS US2002099003-A1.
 XX PN 25-JUL-2002.
 XX PD 13-AUG-2001; 2001US-00929818.
 XX PF 28-OCT-1997; 97US-00959057.
 XX PR 28-OCT-1997; 97US-00959064.
 XX PR 27-OCT-1998; 98US-00181316.
 XX PR 04-FEB-2000; 2000US-00498522.
 XX (WILSON) WILSON L F.
 XX (PLAC) PLACE V A.
 XX PI Wilson LF, Place VA;
 XX FI WPI; 2002-697729/75.
 XX DR Treating sexual dysfunction in females comprises administering vasoactive
 XX PT intestinal polypeptide or against to vagina and/or vulvar region.
 XX PS Claim 19; Page; 19pp; English.

XX The invention relates to a method for treating sexual dysfunction in
 CC females comprising administering a formulation comprising a vasoactive
 CC agent comprising a vasoactive intestinal polypeptide and/or agonist to

CC the vagina and/or vulvar region. The method is used for preventing
 CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952

XX Sequence 28 AA;
 SQ Query Match 96.5%; Score 137; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 6.5e-11;
 Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTNNYTRLRKQMAVKKYLNSILN 28
 Db 1 HSDAVFTNNYTRLRKQMAVKKYLNSILN 28

RESULT 3
 ABG94138
 ID ABG94138 standard; peptide; 28 AA.
 XX AC ABG94138;
 XX DT 27-NOV-2002 (first entry)
 XX DE Human vasoactive intestinal polypeptide (VIP) analogue #186.

XX Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
 KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
 KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
 KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
 KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
 KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
 KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.

XX Unidentified.
 XX OS US2002099003-A1.
 XX PN 25-JUL-2002.
 XX PD 13-AUG-2001; 2001US-00929818.
 XX PF 28-OCT-1997; 97US-00959057.
 XX PR 28-OCT-1997; 97US-00959064.
 XX PR 27-OCT-1998; 98US-00181316.
 XX PR 04-FEB-2000; 2000US-00498522.
 XX (WILSON) WILSON L F.
 XX (PLAC) PLACE V A.
 XX PI Wilson LF, Place VA;
 XX FI WPI; 2002-697729/75.
 XX DR Treating sexual dysfunction in females comprises administering vasoactive
 XX PT intestinal polypeptide or against to vagina and/or vulvar region.
 XX PS Claim 19; Page; 19pp; English.

XX The invention relates to a method for treating sexual dysfunction in
 CC females comprising administering a formulation comprising a vasoactive
 CC agent comprising a vasoactive intestinal polypeptide and/or agonist to

CC agent comprising a vasoactive intestinal polypeptide and/or agonist to
CC the vagina and/or vulvar region. The method is used for preventing
CC vaginal atrophy and pain during intercourse, for treating vaginal itching
CC and dryness, for enhancing sexual desire and responsiveness in females
CC and for maintaining improvement of the tissue health of the female
CC genitalia. The method is also used for treating persistent or recurrent
CC deficiency or absence of sexual fantasies and desire for sexual activity,
CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
CC diabetes mellitus, substance-induced decreases in sexual desire and
CC responsiveness and primary and secondary anorgasmia. The formulation
CC improves vaginal muscle tone and tissue health, increases vaginal
CC lubrication and minimises collagen misdeposition resulting from hypoxia.
CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
CC analogue with agonist and/or antagonist activity. Note: The present
CC sequence is not featured in the printed specification but was derived
CC from the wild-type peptide shown in ABG93952
XX
XX
SQ Sequence 28 AA;

Query Match 95.8%; Score 136; DB 5; Length 28;
Best Local Similarity 96.4%; Pred. NO. 8.8e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
 |||||
Db 1 HSDAVFTTNYTRLRKOMAVKKYLSILN 28

RESULT 4
ABG94139
ID ABG94139 standard; peptide; 28 AA.

DT 27-NOV-2002 (first entry)

DE Human vasoactive intestinal polypeptide (VIP) analogue #187.

Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva; vagina; vaginal atrophy; pain; intercourse; vaginal itching; vaginal dryness; sexual desire enhancement; female genitalia; frigidity; sexual aversion; menopausal state; post-menopausal state; sexual desire; sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus; peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia; vaginal muscle tone; vaginal lubrication; collagen misdeposition.

Unidentified.

US2002099003-A1.

25-JUL-2002.

AA
PF 13-AUG-2001; 2001US-00929818.

PR 28-OCT-1997: 97US-00959057.

PR	28-OCT-1997;	97US-00959064;
PR	27-OCT-1998;	98US-00181316;

PR 04-FEB-2000; 2000US-00498522.
XX

PA (WILS//) WILSON L F.
PA (PLAC//) PLACE V A

XX
PT Wilson 18 17-00 11A.

25/05/2019 15:00

X

PT intestinal polypeptide or against to vagina and/or vulvar region.

PS Claim 19; Page; 19pp; English.

CC The invention relates to a method for treating sexual dysfunction in

CC females comprising administering a formulation comprising a vasoactive
CC agent comprising a vasoactive intestinal polypeptide and/or agonist to
CC the vagina and/or vulvar region. The method is used for preventing
CC vaginal atrophy and pain during intercourse, for treating vaginal itching
CC and dryness, for enhancing sexual desire and responsiveness in females
CC and for maintaining improvement of the tissue health of the female
CC genitalia. The method is also used for treating persistent or recurrent
CC deficiency or absence of sexual fantasies and desire for sexual activity,
CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
CC diabetes mellitus, substance-induced decreases in sexual desire and
CC responsiveness and primary and secondary anorgasmia. The formulation
CC improves vaginal muscle tone and tissue health, increases vaginal
CC lubrication and minimises collagen misdeposition resulting from hypoxia.
CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
CC analogue with agonist and/or antagonist activity. Note: The present
CC sequence is not featured in the printed specification but was derived
CC from the wild-type peptide shown in ABG93952

Sequence 28 AA;

Query Match 95.8%; Score 136; DB 5; Length 28;
Best Local Similarity 96.4%; Pred.No. 8.8e-11;
Matches 27: Conservative 0; Mismatches 1; Indels

Qy 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTSNYTRLRKQMAVKKYLNSILN 28
|||||

RESULT 5

AAPI0172

ID AAP10172 standard; peptide: 28 AA.

AC AAP10172:

DT 25-MAR-2003 (revised)

DT	21-DEC-1992	(first entry)
DT	23-DEC-2003	(revised)

XX DE VTP.

XX Vagocutiv intestinal polymide.

KW vasoactive intestinal polypeptide; isolation-inhibiting action.

XX
30
Homo sapiens

XX	TDFC100701
----	------------

XX

XX

XX

[illegible]

FA (E)SH / E)SH CO DID
XX

DR
XX
WFI; 1981-86052D/41.

PT Antiallergic agent comprises peptide - contg. 28 amino acid units, is active against a bronchial asthma and hay fever.

XX
XX
pg Claim 1. Page 1. Jan. Tanager

[illegible]

CC agent. Vasoactive intestinal polypeptide (VIP) has chemical mediator
CC isolation-inhibiting action and is effective for therapy and prevention
CC of various allergic diseases, such as allergic rhinitis, bronchial
CC asthma, allergic asthma, hay fever, urticaria, eczema, atopic dermatitis
CC etc. Since it also has specific bronchial smooth muscle relaxant action,
CC it is especially useful for treating and preventing bronchial and allergic
CC asthma. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
CC 2003 to correct PA field.)

Wed Feb 8 17:49:06 2006

us-10-626-719-5.rag

```
SQ Sequence 28 AA;
Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.2e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 6
AAP71039
ID AAP71039 standard; peptide; 28 AA.
XX
AC AAP71039;
XX
DT 03-OCT-2002 (revised)
DT 05-APR-1991 (first entry)
XX
DE Sequence of active ingredient in hair growth promoting compns.
XX
KW Vasoactive intestinal tract polypeptide; digestive tract polypeptide;
KW hair growth promoter.
XX
OS Synthetic.
XX
PN EP225639-A.
XX
PD 16-JUN-1987.
XX
PF 10-DEC-1986; 86EP-00117190.
XX
PR 10-DEC-1985; 85JP-00276099.
XX
PA (MEIJ ) MEIJI SEIKA KAISHA.
XX
PI Yanaihara N, Watanabe S, Kasai M, Sato T, Kikkaji T;
XX
WPI; 1987-164873/24.
XX
Hair growth promoting compns. - contg. vasoactive intestinal polypeptide
and carrier.
XX
Claim 1; Page 8; 10pp; English.
XX
When applied to the skin, the peptide causes a local increase in blood
flow and promotes hair growth. It is the natural peptide known as
vasoactive intestinal polypeptide which has been isolated from the
digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)
XX
SQ Sequence 28 AA;
Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.2e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 7
AAR34943
ID AAR34943 standard; peptide; 28 AA.
XX
AC AAR34943;
XX
DT 25-MAR-2003 (revised)
DT 28-JUL-1993 (first entry)
XX
DE Porcine VIP.
XX

KW Vasoactive intestinal peptide; asthma; bronchodilation activity;
bronchiotracheal constrictive disorders.
XX
Sus scrofa.
XX
EP536741-A2.
XX
14-APR-1993.
XX
08-OCT-1992; 92EP-00117185.
XX
11-OCT-1991; 91US-00773747.
XX
(HOFF ) HOFFMANN LA ROCHE & CO AG F.
XX
Boln DR, Odonnell M;
XX
WPI; 1993-118996/15.
XX
New cyclic vasoactive intestinal peptide (VIP) analogues - are useful for
the treatment of bronchotracheal constructive disorders e.g. asthma.
XX
Disclosure; Page 65; 141pp; English.
XX
The sequence is that of porcine vasoactive intestinal peptide (VIP) as
claimed in EP-325044. The peptide sequence was used to design cyclic
analogues of VIP which have enhanced bronchodilation activity without any
observable side effects such as cardiovascular side effects. The
bronchodilation produced by the analogues can be sustained for more than
two hours. The analogues may be used for the treatment of bronchotracheal
constrictive disorders, e.g. asthma. See also RR3944-5016. (Updated on 25
-MAR-2003 to correct PN field.)
XX
SQ Sequence 28 AA;
Query Match 95.1%; Score 135; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.2e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 8
AAR40272
ID AAR40272 standard; protein; 28 AA.
XX
AC AAR40272;
XX
DT 25-MAR-2003 (revised)
DT 09-FEB-1994 (first entry)
XX
Native VIP.
XX
Vasoactive intestinal peptide; VIP; bronchodilator; cardiovascular;
side effect; bronchoconstrictive disorder; asthma.
XX
Sus scrofa.
XX
Key Location/Qualifiers
FH Modified-site 28
FT /note= "C-terminal is amidated"
XX
US5234907-A.
XX
10-AUG-1993.
XX
24-APR-1991; 91US-00690300.
XX
30-JUN-1989; 89US-00374503.
XX
(HOFF ) HOFFMANN LA ROCHE INC.
XX
PA
```

```
XX Bolin DR;
XX
XX WPI; 1993-264645/33.
XX
XX New vasoactive intestinal peptide analogues - are potent bronchodilators
XX without cardiovascular side effects, used for treating, e.g. asthma.
XX
XX Disclosure; Page 25-26; 66pp; English.
XX
XX VIP (AAR40272) was used in the prodn. of analogues (AAR40273-78: generic
XX formulae; AAR40279-364: examples). The VIP analogues are potent
XX bronchodilators and have no cardiovascular side effects. They are used
XX for the treatment of bronchoconstrictive disorders, e.g. asthma. (Updated
XX on 25-MAR-2003 to correct PF field.)
XX
XX Sequence 28 AA;
XX
XX Query Match 95.1%; Score 135; DB 2; Length 28;
XX Best Local Similarity 96.4%; Pred. No. 1.2e-10;
XX Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
XX
XX QY 1 HSDAVFTNRYTRLRKQMAVKYKYLNSILN 28
XX ||||| ||||| ||||| ||||| |||||
XX Db 1 HSDAVFTDNYTRLRKQMAVKYKYLNSILN 28
XX ||||| ||||| ||||| ||||| |||||
XX
XX RESULT 9
XX AAR53111
XX ID AAR53111 standard; peptide; 28 AA.
XX
XX AC AAR53111;
XX
XX DT 20-DEC-1994 (first entry)
XX
XX DE Bronchodilator peptide #21.
XX
XX KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
XX selectively; toxicity; mammal; bronchodilator.
XX
XX OS Synthetic.
XX
XX FH Key Location/Qualifiers
XX FT Misc-difference 10 /note= "D-form residue"
XX FT Misc-difference 22 /note= "D-form residue"
XX FT Modified-site 28 /note= "D-form residue"
XX FT Modified-site 28 /note= "Amidated C-terminal"
XX
XX PN JP06092991-A.
XX
XX PD 05-APR-1994.
XX
XX PF 28-FEB-1991; 91JP-00034335.
XX
XX PR 28-FEB-1991; 91JP-00034335.
XX
XX PA (DAIL ) DAICEL CHEM IND LTD.
XX PA (MEIJ ) MEIJI SEIKA KAISHA.
XX
XX DR WPI; 1994-147946/18.
XX
XX PT Active peptide(s), having smooth muscle relaxing activity - useful as
XX bronchodilators.
XX
XX PS Disclosure; Page 5; 29pp; Japanese.
XX
XX CC The sequences given in AAR53091-111 are synthetic peptides based on
XX vasoactive intestinal peptide (VIP) which have the activity of relaxing
XX the smooth muscle selectively and are only low toxic-non- toxic to
XX mammals. These peptides may be used as bronchodilators. They are prepared
XX by solid phase synthesis using a resin having an amino functional group
XX capable of bonding to the amino acid at the carboxy terminal through a
XX carboxyl group and fixing the peptide chain during the synthesis
XX
XX Sequence 28 AA;
XX
XX Query Match 95.1%; Score 135; DB 2; Length 28;
XX Best Local Similarity 96.4%; Pred. No. 1.2e-10;
XX Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
XX
XX QY 1 HSDAVFTNRYTRLRKQMAVKYKYLNSILN 28
XX ||||| ||||| ||||| ||||| |||||
XX Db 1 HSDAVFTDNYTRLRKQMAVKYKYLNSILN 28
XX ||||| ||||| ||||| ||||| |||||
XX
XX RESULT 11
XX AAR53109
XX ID AAR53109 standard; peptide; 28 AA.
XX
XX AC AAR53109;
XX
XX DT 20-DEC-1994 (first entry)
XX
XX DE Bronchodilator peptide #19.
XX
XX KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
XX selectively; toxicity; mammal; bronchodilator.
XX
XX OS Synthetic.
XX
XX FH Key Location/Qualifiers
XX FT Misc-difference 10 /note= "D-form residue"
XX FT Modified-site 28 /note= "D-form residue"
XX FT Modified-site 28 /note= "Amidated C-terminal"
XX
XX PN JP06092991-A.
XX
XX PD 05-APR-1994.
XX
XX PF 28-FEB-1991; 91JP-00034335.
XX
XX PR 28-FEB-1991; 91JP-00034335.
XX
XX PA (DAIL ) DAICEL CHEM IND LTD.
XX PA (MEIJ ) MEIJI SEIKA KAISHA.
XX
XX DR WPI; 1994-147946/18.
XX
XX PT Active peptide(s), having smooth muscle relaxing activity - useful as
XX bronchodilators.
XX
XX PS Disclosure; Page 5; 29pp; Japanese.
XX
XX CC The sequences given in AAR53091-111 are synthetic peptides based on
XX vasoactive intestinal peptide (VIP) which have the activity of relaxing
XX the smooth muscle selectively and are only low toxic-non- toxic to
XX mammals. These peptides may be used as bronchodilators. They are prepared
XX by solid phase synthesis using a resin having an amino functional group
```

AAR53110
ID AAR53110 standard; peptide; 28 AA.
XX AC
XX AAR53110;
XX DT 20-DEC-1994 (first entry)
XX DE Bronchodilator peptide #20.
XX KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
XX KW selectively; toxicity; mammal; bronchodilator.
XX OS Synthetic.
XX FT Key Location/Qualifiers
XX FT Misc-difference 22
XX FT /note= "D-form residue"
XX FT Modified-site 28
XX FT /note= "Amidated C-terminal"
XX JN JP06092991-A.
XX 05-APR-1994.
XX 28-FEB-1991; 91JP-00034335.
XX 28-FEB-1991; 91JP-00034335.
XX (DAIL) DAICEL CHEM IND LTD.
XX (MEIJ) MEIJI SEIKA KAISHA.
XX WPI; 1994-147946/18.
XX Active peptide(s), having smooth muscle relaxing activity - useful as
XX bronchodilators.
XX Disclosure; Page 5; 29pp; Japanese.
XX The sequences given in AAR53091-111 are synthetic peptides based on
XX vasoactive intestinal peptide (VIP) which have the activity of relaxing
XX the smooth muscle selectively and are only low toxic-non- toxic to
XX mammals. These peptides may be used as bronchodilators. They are prepared
XX by solid phase synthesis using a resin having an amino functional group
XX capable of bonding to the amino acid at the carboxy terminal through a
XX carboxyl group and fixing the peptide chain during the synthesis
XX SQ Sequence 28 AA;
Query Match 95.1%; Score 135; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.2e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
RESULT 12
AAR87092
ID AAR87092 standard; peptide; 28 AA.
XX AC AAR87092;
XX DT 06-JUN-1996 (first entry)
XX KW Vasoactive intestinal peptide, forms part of gene transfer complex.
XX KW Porcine; VIP; call surface receptor; ligand; gene transfer; transfection;
XX KW gene therapy; vaccine.
XX OS Sus scrofa.
XX JN Key Location/Qualifiers
XX JN 19-JUL-1995.

AAR53110
ID AAR53110 standard; peptide; 28 AA.
XX AC
XX AAR53110;
XX DT 20-DEC-1994 (first entry)
XX DE Bronchodilator peptide #20.
XX KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
XX KW selectively; toxicity; mammal; bronchodilator.
XX OS Synthetic.
XX FT Key Location/Qualifiers
XX FT Misc-difference 22
XX FT /note= "D-form residue"
XX FT Modified-site 28
XX FT /note= "Amidated C-terminal"
XX JN JP06092991-A.
XX 05-APR-1994.
XX 28-FEB-1991; 91JP-00034335.
XX 28-FEB-1991; 91JP-00034335.
XX (DAIL) DAICEL CHEM IND LTD.
XX (MEIJ) MEIJI SEIKA KAISHA.
XX WPI; 1994-147946/18.
XX Active peptide(s), having smooth muscle relaxing activity - useful as
XX bronchodilators.
XX Disclosure; Page 5; 29pp; Japanese.
XX The sequences given in AAR53091-111 are synthetic peptides based on
XX vasoactive intestinal peptide (VIP) which have the activity of relaxing
XX the smooth muscle selectively and are only low toxic-non- toxic to
XX mammals. These peptides may be used as bronchodilators. They are prepared
XX by solid phase synthesis using a resin having an amino functional group
XX capable of bonding to the amino acid at the carboxy terminal through a
XX carboxyl group and fixing the peptide chain during the synthesis
XX SQ Sequence 28 AA;
Query Match 95.1%; Score 135; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.2e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
RESULT 12
AAR87092
ID AAR87092 standard; peptide; 28 AA.
XX AC AAR87092;
XX DT 06-JUN-1996 (first entry)
XX KW Vasoactive intestinal peptide, forms part of gene transfer complex.
XX KW Porcine; VIP; call surface receptor; ligand; gene transfer; transfection;
XX KW gene therapy; vaccine.
XX OS Sus scrofa.
XX JN Key Location/Qualifiers
XX JN 19-JUL-1995.

FT Modified-site 28 /note= "amidated"
XX FT
XX FN FR2719316-A1.
XX PD 03-NOV-1995.
XX PF 28-APR-1994; 94FR-00005174.
XX PR 28-APR-1994; 94FR-00005174.
XX PA (IDMI-) IDM IMMUNO-DESIGNED MOLECULES.
XX PI Midoux P, Erbacher P, Roche-Degremont A, Monsigny M;
XX WPI; 1995-375617/49.
XX New nucleic acid complexes with cationic polymers - useful for genetic
XX transformation of cells.
XX Claim 11; Page 43; 58pp; French.
XX In novel complexes of negatively-charged nucleic acids and positively-
XX charged polymers, the polymers comprise monomer subunits bearing NH3+
XX groups, at least 10% of which are replaced by uncharged amino groups
XX bearing a substit. that has at least one -OH group and is not recognised
XX by cell membrane receptors; the side-chain groups of the polymer (i.e.
XX the NH3+ and/or OH groups) may be substd. by a group that is recognised
XX by a cell membrane receptor, provided that at least 30% of the NH3+
XX groups remain free. The complexes are useful for transfecting particular
XX nucleic acid sequences into particular cell types, depending on the
XX identity of the cell membrane receptor ligands involved, e.g. for gene
XX therapy or prepn. of vaccines. Preferred ligands are oligoglycoside
XX antigens recognised by lectins, natural metabolites (such as biotin,
XX tetrahydrofolate, folic acid or carnitine) or peptides (pref. vasoactive
XX intestinal peptide, atrial natriuretic peptide, lipocortin, bradykinin,
XX peptide hormones such as alpha-MSH, chemotactic factors and integrin
XX ligands)
XX SQ Sequence 28 AA;
Query Match 95.1%; Score 135; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.2e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
RESULT 13
AAR83785
ID AAR83785 standard; peptide; 28 AA.
XX AC AAR83785;
XX DT 27-FEB-1996 (first entry)
XX DE VIP.
XX KW VIP; vasoactive intestinal polypeptide; peptide hormone; glucagon;
XX KW secretin; nervous system; digestive system; smooth muscle; relaxant;
XX KW bronchial asthma; impotence; therapy.
XX OS Sus scrofa.
XX JN Key Location/Qualifiers
XX JN Misc-difference 29
XX JN /note= "amidated"
XX JN EP663406-A1.
XX JN 19-JUL-1995.

[illegible]

Search completed: January 25, 2006, 15:08:20
Job time : 77.875 secs

Result No.	Score	Query Match	Length	DB	ID	Description	
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3	138	97.2	28	2	US-09-528-200-4	Sequence 4, Appli	
4	135	95.1	28	1	US-07-690-3008-1	Sequence 1, Appli	
5	135	95.1	28	1	US-07-676-987A-1	Sequence 1, Appli	
6	135	95.1	28	1	US-07-868-906-1	Sequence 1, Appli	
7	135	95.1	28	1	US-08-201-092-1	Sequence 1, Appli	
8	135	95.1	28	1	US-07-924-054-11	Sequence 11, Appli	
9	135	95.1	28	1	US-08-243-082-1	Sequence 1, Appli	
10	135	95.1	28	1	US-08-361-443-1	Sequence 1, Appli	
11	135	95.1	28	1	US-08-288-681A-1	Sequence 1, Appli	
12	135	95.1	28	1	US-07-776-272-26	Sequence 26, Appli	
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14	135	95.1	28	1	US-08-062-472B-40	Sequence 40, Appli	
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17	135	95.1	28	1	US-08-519-180-2	Sequence 2, Appli	
18	135	95.1	28	1	US-08-414-424-1	Sequence 1, Appli	
19	135	95.1	28	1	US-08-413-708B-1	Sequence 1, Appli	
20	135	95.1	28	1	US-08-618-253-37	Sequence 37, Appli	
21	135	95.1	28	1	US-08-897-624-1	Sequence 1, Appli	
22	135	95.1	28	2	US-08-930-845-1	Sequence 1, Appli	
23	135	95.1	28	2	US-08-952-568-3	Sequence 3, Appli	
24	135	95.1	28	2	US-08-952-568-4	Sequence 4, Appli	
25	135	95.1	28	2	US-08-952-568-5	Sequence 5, Appli	
26	135	95.1	28	2	US-08-952-568-6	Sequence 6, Appli	
27	135	95.1	28	2	US-08-952-568-10	Sequence 10, Appli	

```
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGNER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
; OTHER INFORMATION: peptide
US-09-528-200-3

Query Match          97.2%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-09-528-200-4
; Sequence 4, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARSTEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGNER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
; OTHER INFORMATION: peptide
US-09-528-200-4

Query Match          97.2%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.4e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

RESULT 4
US-07-690-300B-1
; Sequence 1, Application US/07690300B
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; Patent No. 5234907
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/690,300B
; FILING DATE: 19910424
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/374,503
; FILING DATE: 30-JUN-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8480
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa
; US-07-690-300B-1

Query Match          95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 5
US-07-676-987A-1
; Sequence 1, Application US/07676987A
; Patent No. 5273963
; GENERAL INFORMATION:
; APPLICANT: TERRY W. MOODY
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
; TITLE OF INVENTION: CELL AND NONSMALL CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROTHWELL, FTGG, ERNST & KURZ
; STREET: 555 THIRTEENTH ST. N.W.
; CITY: WASHINGTON
; STATE: D. C.
; COUNTRY: U.S.
; ZIP: 20004
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
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/ SOFTWARE: PatentIn Release #1.0, Version #1.25
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/07/676,987A
/ FILING DATE: 19910329
/ CLASSIFICATION: 514
/ ATTORNEY/AGENT INFORMATION:
/ NAME: REPPER, GEORGE R.
/ REGISTRATION NUMBER: 31,414
/ REFERENCE/DOCKET NUMBER: 1783-101
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: (202) 783-6040
/ TELEFAX: (202) 783-6031
/ INFORMATION FOR SEQ ID NO: 1:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 28 amino acids
/ TYPE: AMINO ACID
/ TOPOLOGY: linear
/ MOLECULE TYPE: peptide
US-07-676-987A-1

Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 6
US-07-868-906-1
/ Sequence 1, Application US/07868906
/ Patent No. 5376637
/ GENERAL INFORMATION:
/ APPLICANT: Sawai, Kiichi
/ APPLICANT: Kuroono, Masayasu
/ APPLICANT: Mitani, Takahiko
/ APPLICANT: Sato, Makoto
/ APPLICANT: Takahashi, Haruo
/ APPLICANT: Ohwaki, Hiroyuki
/ TITLE OF INVENTION: PHARMACEUTICAL PREPARATION CONTAINING
/ TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE OR ITS ANALOGUE
/ NUMBER OF SEQUENCES: 3
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: Nikaido, Marmelstein, Murray & Oram
/ STREET: 1725 K St. N.W. Suite 1000
/ CITY: Washington
/ STATE: D.C.
/ COUNTRY: USA
/ ZIP: 20006
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ COMPUTER: IBM PC compatible
/ OPERATING SYSTEM: PC-DOS/MS-DOS
/ SOFTWARE: PatentIn Release #1.0, Version #1.25
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/07/868,906
/ FILING DATE: 19920416
/ CLASSIFICATION: 424
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: JP 3-90671
/ FILING DATE: 22-APR-1991
/ ATTORNEY/AGENT INFORMATION:
/ NAME: Oram Jr., George E.
/ REGISTRATION NUMBER: 27,931
/ REFERENCE/DOCKET NUMBER: 920238N
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: (202) 659-2930
/ TELEFAX: (202) 887-0357
/ TELEX: 440142
/ INFORMATION FOR SEQ ID NO: 1:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 28 amino acids
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/ TYPE: AMINO ACID
/ TOPOLOGY: linear
/ MOLECULE TYPE: peptide
US-07-868-906-1

Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 7
US-08-201-092-1
/ Sequence 1, Application US/08201092
/ Patent No. 5428015
/ GENERAL INFORMATION:
/ APPLICANT: KURONO, Masayasu
/ APPLICANT: MITANI, Takahiko
/ APPLICANT: TAKAHASHI, Haruo
/ APPLICANT: SAWAI, Kiichi
/ TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE
/ TITLE OF INVENTION: ANALOGUES AND USE THEREOF
/ NUMBER OF SEQUENCES: 4
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: Armstrong, Nikaido, Marmelstein, Kubovcik, &
/ ADDRESSEE: Murray
/ STREET: 1725 K St. N.W. Suite 1000
/ CITY: Washington
/ STATE: D.C.
/ COUNTRY: U. S. A.
/ ZIP: 20006
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ COMPUTER: IBM PC compatible
/ OPERATING SYSTEM: PC-DOS/MS-DOS
/ SOFTWARE: PatentIn Release #1.0, Version #1.25
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/08/201,092
/ FILING DATE: 24-FEB-1994
/ CLASSIFICATION:
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: JP 2-165739
/ FILING DATE: 26-JUN-1990
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: JP 2-408425
/ FILING DATE: 27-DEC-1990
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: US 07/704,143
/ FILING DATE: 22-MAY-1991
/ ATTORNEY/AGENT INFORMATION:
/ NAME: Oram Jr., George E.
/ REGISTRATION NUMBER: 27,931
/ REFERENCE/DOCKET NUMBER: N910809
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: (202)-659-2930
/ TELEFAX: (202)-887-0357
/ TELEX: 440142
/ INFORMATION FOR SEQ ID NO: 1:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 28 amino acids
/ TYPE: amino acid
/ TOPOLOGY: linear
/ MOLECULE TYPE: peptide
/ FRAGMENT TYPE: C-terminal
/ ORIGINAL SOURCE:
/ ORGANISM: Homo sapiens
/ TISSUE TYPE: Small intestine, proximal
US-08-201-092-1

Query Match 95.1%; Score 135; DB 1; Length 28;
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Best Local Similarity 96.4%; Pred. No. 2e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 8
US-07-924-054-11
; Sequence 1, Application US/07924054
; Patent No. 5486472
; GENERAL INFORMATION:
; APPLICANT: SUZUKI, No. 5486472uhiro
; APPLICANT: KITADA, Chieko
; APPLICANT: TSUDA, Masao
; TITLE OF INVENTION: ANTIBODY TO PACAP AND USE THEREOF
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS: 11
; ADDRESSEE: DAVID G. CONLIN; DIKE, BRONSTEIN, ROBERTS&
; ADDRESS: CUSHMAN
; STREET: 130 Water Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: US
; ZIP: 02109
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/924,054
; FILING DATE: 19920903
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: RESNICK, David S
; REGISTRATION NUMBER: 34235
; REFERENCE/DOCKET NUMBER: 40805
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617)523-3400
; TELEFAX: (617)523-6440
; TELEX: 200291 STRE UR
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-07-924-054-11

Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 9
US-08-243-082-1
; Sequence 1, Application US/08243082
; Patent No. 5506120
; GENERAL INFORMATION:
; APPLICANT: YAMAMOTO, Hiroaki
; APPLICANT: YAMASHITA, Kunihiko
; TITLE OF INVENTION: METHOD OF PRODUCING PEPTIDES OR
; TITLE OF INVENTION: PROTEINS
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Spencer, Frank & Schneider
; STREET: 1111 Nineteenth Street, N.W.
```

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CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20036
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/243,082
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/853,754
FILING DATE: 05-JUN-1992
ATTORNEY/AGENT INFORMATION:
NAME: Schneller, John W.
REGISTRATION NUMBER: 26,031
REFERENCE/DOCKET NUMBER: KUWAT 0010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 828-8000
TELEFAX: (202) 828-8038
TELEX: SPENCER 64267
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
US-08-243-082-1

Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 10
US-08-361-443-1
; Sequence 1, Application US/08361443
; Patent No. 5521157
; GENERAL INFORMATION:
; APPLICANT: No. 5521157a, Hitoshi
; APPLICANT: Yamakawa, Hidehumi
; APPLICANT: Yoshina, Shigeaki
; APPLICANT: Ishida, Tautomu
; APPLICANT: Tomiya, No. 5521157oru
; TITLE OF INVENTION: MODIFIED POLYPEPTIDE COMPOUND AND USE OF
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: SUGHRUE, MION, ZINN, MACPEAK & SEAS
; STREET: 2100 Pennsylvania Ave.
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/361,443
FILING DATE:
CLASSIFICATION: 530
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;; PRIOR APPLICATION DATA:
;; APPLICATION NUMBER: JP Hei. 5-319815
;; FILING DATE: 20-DEC-1993
;; INFORMATION FOR SEQ ID NO: 1:
;; SEQUENCE CHARACTERISTICS:
;; LENGTH: 28 amino acids
;; TYPE: amino acid
;; STRANDEDNESS: single
;; TOPOLOGY: linear
;; MOLECULE TYPE: peptide
US-08-361-443-1

Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 11
US-08-288-681A-1
; Sequence 1, Application US/08288681A
; Patent No. 5595897
; GENERAL INFORMATION:
; APPLICANT: MIDOUX, PATRICK; ERBACHER,
; APPLICANT: PATRICK; ROCHE-DEGREMONT, ANNIE-CLAUDE;
; APPLICANT: MONSIGNY, MICHEL
; TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC
; TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
; TITLE OF INVENTION: PREPARATION AND THEIR USAGE FOR TRANSFECTION
; NUMBER OF SEQUENCES: 7
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BIERMAN & MUSERLIAN
; STREET: 600 THIRD AVENUE
; CITY: NEW YORK
; STATE: NEW YORK
; COUNTRY: USA
; ZIP: 10016
; COMPUTER READABLE FORM:
; MEDIUM TYPE: FLOPPY DISK
; COMPUTER: IBM PC COMPATIBLE
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: ASCII
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/288,681A
; FILING DATE: 10-AUG-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR/94/05174
; FILING DATE: 28-APR-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: CHARLES A. MUSERLIAN
; REGISTRATION NUMBER: 19,683
; REFERENCE/DOCKET NUMBER: 410.005
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 661-8000
; TELEFAX: (212) 661-8002
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28
; TYPE: Amino Acid
; STRANDEDNESS: Unknown
; TOPOLOGY: Unknown
; MOLECULE TYPE: PEPTIDE
US-08-288-681A-1

Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 12
US-07-776-272-26
; Sequence 26, Application US/07776272
; Patent No. 5612454
; GENERAL INFORMATION:
; APPLICANT: Kaminuma, Toshihiko
; APPLICANT: Iida, Toshii
; APPLICANT: Tajima, Masahiro
; TITLE OF INVENTION: Process for Purification of Polypeptide
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Wegner, Cantor, Mueller & Player
; STREET: 1233 20th St. N.W. P.O. Box 18218
; CITY: Washington
; STATE: District of Columbia
; COUNTRY: United States of America
; ZIP: 20036-8218
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/776,272
; FILING DATE: 19911129
; CLASSIFICATION: 530
; ATTORNEY/AGENT INFORMATION:
; NAME: Player, William E
; REGISTRATION NUMBER: 31,409
; REFERENCE/DOCKET NUMBER: P-450-23167
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-887-0400
; TELEFAX: 202-887-0605
; TELEX: 440706
; INFORMATION FOR SEQ ID NO: 26:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: YES
US-07-776-272-26

Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 13
US-08-308-729-1
; Sequence 1, Application US/08308729
; Patent No. 5677419
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Cyclic Vasoactive Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 73
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110

us-10-626-719-5-rai

Wed Feb 8 17:49:06 2006

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;
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/308,729
; FILING DATE:
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/153,530
; FILING DATE:
; APPLICATION NUMBER: US 07/773,747
; FILING DATE: 11-OCT-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8322
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa
; PUBLICATION INFORMATION:
; DOCUMENT NUMBER: EP 325 044 A A
; FILING DATE: 22-DEC-1987
; PUBLICATION DATE: 26-JUL-1989
; RELEVANT RESIDUES IN SEQ ID NO: 1: FROM 18 TO 23
;
; US-08-308-729-1
;
; Query Match 95.1%; Score 135; DB 1; Length 28;
; Best Local Similarity 96.4%; Pred. No. 2e-12;
; Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
;
; Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
; Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
;
; RESULT 14
; US-08-062-472B-40
; Sequence 40, Application US/08062472B
; Patent No. 5695954
; GENERAL INFORMATION:
; APPLICANT: Sherwood, Nancy G M
; APPLICANT: Parker, David B
; APPLICANT: McGory, John E
; APPLICANT: Lescheid, David W
; TITLE OF INVENTION: DNA ENCODING TWO FISH NEUROPEPTIDES
; NUMBER OF SEQUENCES: 49
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: KLARQUIST, SPARKMAN, CAMPBELL, LEIGH &
; ADDRESS: WHINSTON, LLP
; STREET: ONE WORLD TRADE CENTER, SUITE 1600, 121 S.W.
; CITY: PORTLAND
; STATE: OREGON
; COUNTRY: USA
; ZIP: 97204-2988
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:

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; APPLICATION NUMBER: US/08/062,472B
; FILING DATE: 14-MAY-1993
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: POLLEY, RICHARD J
; REGISTRATION NUMBER: 28107
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (503) 226-7391
; TELEFAX: (503) 228-9446
; INFORMATION FOR SEQ ID NO: 40:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
;
; US-08-062-472B-40
;
; Query Match 95.1%; Score 135; DB 1; Length 28;
; Best Local Similarity 96.4%; Pred. No. 2e-12;
; Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
;
; Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
; Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
;
; RESULT 15
; US-08-171-701A-1
; Sequence 1, Application US/08171701A
; Patent No. 5721211
; GENERAL INFORMATION:
; APPLICANT:
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
; TITLE OF INVENTION: TREATING SMALL CELL AND NONSMALL
; TITLE OF INVENTION: CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 3
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3+ Floppy Disk
; COMPUTER: IBM PC Compatible
; OPERATING SYSTEM: MS-DOS
; SOFTWARE: WordPerfect, Version 5.1 Plus
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/171,701A
; FILING DATE: December 22, 1993
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 Amino Acids
; TYPE: Amino Acid
; TOPOLOGY: Linear
; MOLECULE TYPE: Peptide
; FRAGMENT TYPE: N-terminal
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 1
; LOCATION: 1
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 28
; OTHER INFORMATION:
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; US-08-171-701A-1
;
; Query Match 95.1%; Score 135; DB 1; Length 28;
; Best Local Similarity 96.4%; Pred. No. 2e-12;
; Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
;
; Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
; Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
;
; Search completed: January 25, 2006, 15:23:44
; Job time : 22.875 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2006 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:48 ; Search time 53.625 Seconds
(without alignments)
218.167 Million cell updates/sec

Title: US-10-626-719-5
Perfect score: 142
Sequence: 1 HSDAVFTNRYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 41782326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA_Main:
1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pap.*
2: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pap.*
3: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pap.*
4: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pap.*
5: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pap.*
6: /cgn2_6/ptodata/1/pubpaa/US11_PUBCOMB.pap.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	138	97.2	28	3	US-09-929-818-190
2	137	96.5	28	3	US-09-929-818-189
3	136	95.8	28	3	US-09-929-818-187
4	136	95.1	28	3	US-09-929-818-188
5	135	95.1	28	3	US-09-929-818-1
6	135	95.1	28	3	US-09-999-745-53
7	135	95.1	28	3	US-09-554-000-37
8	135	95.1	28	4	US-10-090-109A-1
9	135	95.1	28	4	US-10-044-722-8
10	135	95.1	28	4	US-10-004-530A-17
11	135	95.1	28	4	US-10-114-716A-3
12	135	95.1	28	4	US-10-211-994-1
13	135	95.1	28	4	US-10-197-954-145
14	135	95.1	28	4	US-10-100-256B-1
15	135	95.1	28	4	US-10-254-569A-1
16	135	95.1	28	4	US-10-201-288-31
17	135	95.1	28	4	US-10-343-654-22
18	135	95.1	28	4	US-10-416-822-1
19	135	95.1	28	4	US-10-467-059-14
20	135	95.1	28	5	US-10-494-634-7
21	135	95.1	28	5	US-10-718-071-36
22	135	95.1	28	5	US-10-788-563-17
23	135	95.1	28	5	US-10-760-085-145
24	135	95.1	28	5	US-10-892-981A-1
25	135	95.1	28	5	US-10-769-803-2
26	135	95.1	28	5	US-10-919-325-32
27	135	95.1	28	5	US-10-898-143-1

28	135	95.1	28	5	US-10-930-548-3	Sequence 3, Appli
29	135	95.1	28	5	US-10-770-712-56	Sequence 56, Appl
30	135	95.1	28	5	US-10-799-897A-1	Sequence 1, Appli
31	135	95.1	28	6	US-11-066-697-454	Sequence 454, App
32	135	95.1	28	6	US-11-066-697-455	Sequence 455, App
33	135	95.1	29	4	US-10-131-543-11	Sequence 11, Appl
34	135	95.1	29	4	US-10-131-546-11	Sequence 11, Appl
35	135	95.1	29	4	US-10-131-346-11	Sequence 11, Appl
36	135	95.1	29	4	US-10-415-024-11	Sequence 11, Appl
37	135	95.1	29	6	US-11-088-596-11	Sequence 11, Appl
38	135	95.1	29	6	US-11-086-966-11	Sequence 11, Appl
39	135	95.1	30	3	US-09-929-818-203	Sequence 203, App
40	135	95.1	30	3	US-09-923-818-204	Sequence 204, App
41	135	95.1	30	3	US-09-929-818-205	Sequence 205, App
42	135	95.1	31	4	US-10-131-543-9	Sequence 9, Appli
43	135	95.1	31	4	US-10-131-543-10	Sequence 10, Appl
44	135	95.1	31	4	US-10-131-543-16	Sequence 16, Appl
45	135	95.1	31	4	US-10-131-546-9	Sequence 9, Appli

ALIGNMENTS

RESULT 1
US-09-929-818-190
; Sequence 190, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 190
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
US-09-929-818-190

Query Match 97.2%; Score 138; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 9,2e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
QY 1 HSDAVFTNRYTLRKQMAVKYLSILN 28
Db 1 HSDAVFTQNYTLRKQMAVKYLSILN 28

RESULT 2
US-09-929-818-189
; Sequence 189, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE

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; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; PRIOR FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 189
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
US-09-929-818-189

Query Match          96.5%; Score 137; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28

RESULT 3
US-09-929-818-187
; Sequence 187, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 187
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
US-09-929-818-187

Query Match          95.8%; Score 136; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28

RESULT 4
US-09-929-818-188
; Sequence 188, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 188
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
US-09-929-818-188

Query Match          95.8%; Score 136; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28

RESULT 5
US-09-929-818-1
; Sequence 1, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-929-818-1

Query Match          95.1%; Score 135; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 6
US-09-999-745-53
; Sequence 53, Application US/09999745
; Patent No. US20020157120A1
; GENERAL INFORMATION:
; APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Baird, Geoffrey
; TITLE OF INVENTION: CIRCULARLY PERMUTED FLUORESCENT PROTEIN INDICATORS
; FILE REFERENCE: REGEN1470-1
; CURRENT APPLICATION NUMBER: US/09/999,745
; PRIOR FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: 09/316,920
; PRIOR FILING DATE: 1999-05-21
; NUMBER OF SEQ ID NOS: 67
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 53
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-999-745-53

Query Match 95.1%; Score 135; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 7
US-09-554-000-37
; Sequence 37, Application US/09554000
; Patent No. US20020165364A1
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Miyawaki, Atsushi
; TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR
; DETECTION OF ANALYTES
; FILE REFERENCE: 07257/042001
; CURRENT APPLICATION NUMBER: US/09/554,000
; CURRENT FILING DATE: 2000-04-20
; PRIOR APPLICATION NUMBER: 08/818,252
; PRIOR FILING DATE: 1997-03-14
; NUMBER OF SEQ ID NOS: 56
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 37
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-554-000-37

Query Match 95.1%; Score 135; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 8
US-10-090-109A-1
; Sequence 1, Application US/10090109A
; Publication No. US20020151456A1
; GENERAL INFORMATION:
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; APPLICANT: Perez Gomariz, et al
; TITLE OF INVENTION: Method For Treating and Preventing Septic Shock With
; FILE REFERENCE: G80-016 CIP
; CURRENT APPLICATION NUMBER: US/10/090,109A
; CURRENT FILING DATE: 2002-06-17
; PRIOR APPLICATION NUMBER: US 09/446,352
; PRIOR FILING DATE: 2000-12-17
; NUMBER OF SEQ ID NOS: 3
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: unknown
; FEATURE:
; OTHER INFORMATION: Isolated from small intestines and brains of pigs
US-10-090-109A-1

Query Match 95.1%; Score 135; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 9
US-10-044-722-8
; Sequence 8, Application US/10044722
; Publication No. US20020182729A1
; GENERAL INFORMATION:
; APPLICANT: DICICCO-BLOOM, Emanuel
; APPLICANT: NICOT, Arnaud
; APPLICANT: LU, Nairu
; APPLICANT: SUH, Junghyup
; TITLE OF INVENTION: Pituitary adenylate cyclase-activating polypeptide (PACAP) is an
; FILE REFERENCE: 270/175
; CURRENT APPLICATION NUMBER: US/10/044,722
; CURRENT FILING DATE: 2002-01-11
; NUMBER OF SEQ ID NOS: 8
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-044-722-8

Query Match 95.1%; Score 135; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 10
US-10-004-530A-17
; Sequence 17, Application US/10004530A
; Publication No. US20030050436A1
; GENERAL INFORMATION:
; APPLICANT: Coy, David H.
; APPLICANT: Moreau, Jacques-Pierre
; APPLICANT: Kim, Sun H.
; TITLE OF INVENTION: OCTAPEPTIDE BOMBESIN ANALOGS
; FILE REFERENCE: 00537-00900K
; CURRENT APPLICATION NUMBER: US/10/004,530A
; CURRENT FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 09/260,846
; PRIOR FILING DATE: 1999-03-02
; PRIOR APPLICATION NUMBER: 08/337,127
; PRIOR FILING DATE: 1994-11-10
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; PRIOR APPLICATION NUMBER: 07/779,039
; PRIOR FILING DATE: 1991-10-18
; PRIOR APPLICATION NUMBER: 07/502,438
; PRIOR FILING DATE: 1990-03-30
; PRIOR APPLICATION NUMBER: 07/397,169
; PRIOR FILING DATE: 1989-08-21
; PRIOR APPLICATION NUMBER: 07/376,555
; PRIOR FILING DATE: 1989-07-07
; PRIOR APPLICATION NUMBER: 07/317,941
; PRIOR FILING DATE: 1989-03-02
; PRIOR APPLICATION NUMBER: 07/282,328
; PRIOR FILING DATE: 1988-12-09
; PRIOR APPLICATION NUMBER: 07/257,998
; PRIOR FILING DATE: 1988-10-14
; PRIOR APPLICATION NUMBER: 07/248,771
; PRIOR FILING DATE: 1988-09-23
; PRIOR Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-004-530A-17

Query Match          95.1%; Score 135; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRLKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 11
US-10-114-716A-3
; Sequence 3, Application US/10114716A
; Publication No. US20030078203A1
; GENERAL INFORMATION:
; APPLICANT: Sudhir Paul
; APPLICANT: Yasuhiro Nishiyama
; TITLE OF INVENTION: Covalently Reactive Transition State
; TITLE OF INVENTION: Analogs and Methods of Use Thereof
; FILE REFERENCE: UTH001HB
; CURRENT APPLICATION NUMBER: US/10/114,716A
; CURRENT FILING DATE: 2002-04-01
; PRIOR APPLICATION NUMBER: 09/862,849
; PRIOR FILING DATE: 2001-05-22
; PRIOR APPLICATION NUMBER: 09/046,373
; PRIOR FILING DATE: 1998-03-23
; PRIOR APPLICATION NUMBER: 60/280,624
; PRIOR FILING DATE: 2001-03-31
; NUMBER OF SEQ ID NOS: 57
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Vasoactive intestinal peptide
US-10-114-716A-3

Query Match          95.1%; Score 135; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRLKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 12
US-10-211-994-1
; Sequence 1, Application US/10211994
; Publication No. US20030082201A1
; GENERAL INFORMATION:
; APPLICANT: Thakur, Madhukar
; APPLICANT: Rao, M.R.S.
; APPLICANT: Sengupta, Paromita
; APPLICANT: Prasad, Sudhanand
; APPLICANT: Burman, Anand C.
; APPLICANT: Mukherjee, Rama
; APPLICANT: Thomas, Becky
; TITLE OF INVENTION: MULTIVALENT SYNTHETIC VACCINE FOR CANCER
; FILE REFERENCE: U014152-1
; CURRENT APPLICATION NUMBER: US/10/211,994
; CURRENT FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: 60/309,975
; PRIOR FILING DATE: 2001-08-03
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-211-994-1

Query Match          95.1%; Score 135; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRLKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 13
US-10-197-954-145
; Sequence 145, Application US/10197954
; Publication No. US20030119021A1
; GENERAL INFORMATION:
; APPLICANT: K'ster, Hubert
; APPLICANT: Siddiqi, Suhaib
; APPLICANT: Little, Daniel
; TITLE OF INVENTION: Capture Compounds, Collections Thereof
; TITLE OF INVENTION: And Methods For Analyzing The Proteome And Complex
; TITLE OF INVENTION: Compositions
; FILE REFERENCE: 24743-2305
; CURRENT APPLICATION NUMBER: US/10/197,954
; CURRENT FILING DATE: 2002-07-16
; PRIOR APPLICATION NUMBER: 60/306,019
; PRIOR FILING DATE: 2001-07-16
; PRIOR APPLICATION NUMBER: 60/314,123
; PRIOR FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 60/363,433
; PRIOR FILING DATE: 2002-03-11
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 145
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-197-954-145

Query Match          95.1%; Score 135; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 14
US-10-100-256B-1
; Sequence 1, Application US/10100256B
; Publication No. US20030152511A1
; GENERAL INFORMATION:
; APPLICANT: Thakur, Madhukar

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Search completed: January 25, 2006, 15:31:04
Job time : 53.625 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 15:08:34 ; Search time 3.5 Seconds
(without alignments)
86.633 Million cell updates/sec

Title: US-10-626-719-5

Perfect score: 142

Sequence: 1 HSDAVFTNRYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 75621 seqs, 10829074 residues

Total number of hits satisfying chosen parameters: 75621

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA New:

- 1: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep.*
- 2: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep.*
- 3: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep.*
- 4: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep.*
- 5: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep.*
- 6: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep.*
- 7: /cgn2_6/ptodata/2/pubpaa/US11_NEW_PUB.pep.*
- 8: /cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	135	95.1	28	7	US-11-175-690-352
2	135	95.1	28	7	US-11-175-690-353
3	135	95.1	637	7	US-11-175-690-265
4	135	95.1	637	7	US-11-175-690-266
5	99	69.7	636	7	US-11-175-690-240
6	98	69.0	27	7	US-11-175-690-326
7	98	69.0	27	7	US-11-175-690-327
8	98	69.0	38	7	US-11-175-690-328
9	98	69.0	38	7	US-11-175-690-329
10	98	69.0	636	7	US-11-175-690-239
11	98	69.0	647	7	US-11-175-690-241
12	98	69.0	647	7	US-11-175-690-242
13	74	52.1	636	7	US-11-175-690-278
14	73	51.4	27	7	US-11-175-690-364
15	73	51.4	27	7	US-11-175-690-365
16	73	51.4	636	7	US-11-175-690-277
17	65	45.8	30	7	US-11-112-277-30
18	61	43.0	30	7	US-11-112-277-2
19	58	40.8	30	7	US-11-112-277-29
20	58	40.8	49	6	US-10-997-081A-26
21	58	40.8	49	6	US-10-997-081A-27
22	58	40.8	49	6	US-10-997-081A-28
23	58	40.8	49	6	US-10-997-081A-29
24	58	40.8	49	6	US-10-997-081A-30
25	58	40.8	49	6	US-10-997-081A-31

RESULT 1

US-11-175-690-352
; Sequence 352, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 352
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-352

Query Match 95.1%; Score 135; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.4e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKYLSILN 28
Db 1 HSDAVFTNRYTLRKQMAVKYLSILN 28

RESULT 2

US-11-175-690-353
; Sequence 353, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:

Sequence 32, Appl
Sequence 35, Appl
Sequence 25, Appl
Sequence 11, Appl
Sequence 18, Appl
Sequence 19, Appl
Sequence 20, Appl
Sequence 21, Appl
Sequence 22, Appl
Sequence 23, Appl
Sequence 40, Appl
Sequence 41, Appl
Sequence 10, Appl
Sequence 31, Appl
Sequence 268, App
Sequence 354, App
Sequence 355, App
Sequence 267, App
Sequence 303, App
Sequence 181, App

```
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 353
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-353

Query Match          95.1%; Score 135; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.4e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTRLRKQMAVKKYLNSILN 28
    |||||
DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-11-175-690-265
; Sequence 265, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match          95.1%; Score 135; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 5.1e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
```

```
Best Local Similarity 96.4%; Pred. No. 5.1e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTRLRKQMAVKKYLNSILN 28
    |||||
DB 610 HSDAVFTDNYTRLRKQMAVKKYLNSILN 637

RESULT 4
US-11-175-690-266
; Sequence 266, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 266
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-266

Query Match          95.1%; Score 135; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 5.1e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTRLRKQMAVKKYLNSILN 28
    |||||
DB 25 HSDAVFTDNYTRLRKQMAVKKYLNSILN 52

RESULT 5
US-11-175-690-240
; Sequence 240, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
```


db 1 HSDGIFTDSYRKYRQMAVKKYLA 27

```

RESULT 9
US-11-175-690-329
; Sequence 329, Application US/11175690
; Publication No. US2006014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,232
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 329
; LENGTH: 38
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-329

```

Query Match 69.0%; Score 98; DB 7; Length 38;
Best Local Similarity 66.7%; Pred. No. 7.8e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTRNYTRLRKQMVKKYLNSIL 27
 ||||| :||| :||| :||| :||| :|||
p6 1 HSDGIFTDSYSRYRKMVKKYLAAYL 27

```

RESULT 10
US/11-175-690-239
; Sequence 239, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haselaine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30

```

```

; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 239
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-239

```

Query Match 69.0%; Score 98; DB 7; Length 636;
Best Local Similarity 66.7%; Pred. No. 2e-07;
Matches 18; Conservative 5; Mismatches 4; Indels

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSIL 27
||| : || : | | | | | | | | : |
pB 610 HSDGIFDTSYRKYRKOMAVKKYLA AVL 636

```

RESULT 11
US-11-175-690-241
; Sequence 241, Application US/11175690
; Publication No. US2006014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/457,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 241
; LENGTH: 647
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-241

```

Query Match	69.0%;	Score 98;	DB 7;	Length 647;
Best Local Similarity	66.7%;	Pred. No. 2.1e-07;		
Matches 18; Conservative		5; Mismatches	4; Indels	0; Gaps

QY 1 HSDAVFTRNYTRLRKQMAVKYLNSIL 27
 ||||| :||| :||| :||| :||| :|||
pb 610 HSDGIETDSYSRYRKOMAVKCYLA AVL 636

```

RESULT 12
US-11-175-690-242
; Sequence 242, Application US/11/175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haselstine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305

```


Qy 1 HSDAVFTRNYTRLRKQMAVKYLSILN 28
| : | | | : : : | : | | | | : :
Db 25 HADGVFTSDFSKLGLGOLSAKKYLESMD 52

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> Publication No. US20060014254A1
>
> GENERAL INFORMATION:
>
> APPLICANT: Haseltine et al.
> TITLE OF INVENTION: Albumin Fusion Proteins
>
> FILE REFERENCE: PF605
>
> CURRENT APPLICATION NUMBER: US/11/175,690
>
> CURRENT FILING DATE: 2005-07-07
>
> PRIOR APPLICATION NUMBER: PCT/US04/001369
>
> PRIOR FILING DATE: 2004-01-20
>
> PRIOR APPLICATION NUMBER: US 60/441,305
>
> PRIOR FILING DATE: 2003-01-22
>
> PRIOR APPLICATION NUMBER: US 60/453,201
>
> PRIOR FILING DATE: 2003-03-11
>
> PRIOR APPLICATION NUMBER: US 60/457,222
>
> PRIOR FILING DATE: 2003-05-02
>
> PRIOR APPLICATION NUMBER: US 60/472,816
>
> PRIOR FILING DATE: 2003-05-23
>
> PRIOR APPLICATION NUMBER: US 60/476,267
>
> PRIOR FILING DATE: 2003-06-06
>
> PRIOR APPLICATION NUMBER: US 60/505,172
>
> PRIOR FILING DATE: 2003-09-24
>
> PRIOR APPLICATION NUMBER: US 60/506,746
>
> PRIOR FILING DATE: 2003-09-30
>
> NUMBER OF SEQ ID NOS: 568
>
> SOFTWARE: PatentIn Ver. 2.0
>
> SEQ ID NO 365
>
> LENGTH: 27

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:55:03 ; Search time 13.25 Seconds
(without alignments)
203.326 Million cell updates/sec

Title: US-10-626-719-5

Perfect score: 142

Sequence: 1 HSDAVFTNRYTRLRKQMAVKYKLYNSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : PIR_80.*

1: pir1.*

2: pir2.*

3: pir3.*

4: pir4.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	135	95.1	28	B60071	vasoactive intesti
2	135	95.1	28	A60304	vasoactive intesti
3	135	95.1	55	VRBO	vasoactive intesti
4	135	95.1	55	VRRB	vasoactive intesti
5	135	95.1	55	VRSH	vasoactive intesti
6	135	95.1	58	VRPG	vasoactive intesti
7	135	95.1	145	A60038	vasoactive intesti
8	135	95.1	170	VRHU	vasoactive intesti
9	135	95.1	170	VRRT	vasoactive intesti
10	135	95.1	170	A60037	vasoactive intesti
11	122	85.9	55	1 VRCH	vasoactive intesti
12	120	84.5	165	1 VRCH	vasoactive intesti
13	119	83.8	28	A60303	vasoactive intesti
14	112	78.9	28	A38232	vasoactive intesti
15	109	76.8	25	JQ0361	vasoactive intesti
16	98	69.0	27	A61071	pituitary adenylat
17	98	69.0	38	A49165	pituitary adenylat
18	98	69.0	173	S34767	neuropeptides prec
19	98	69.0	175	A34786	pituitary adenylat
20	98	69.0	176	I94638	pituitary adenylat
21	98	69.0	176	A34044	pituitary adenylat
22	98	69.0	195	I50456	pituitary adenylat
23	92	64.8	38	A61070	pituitary adenylat
24	83	58.5	35	HWGHD	exendin-2 - Gila m
25	80	56.3	38	HWGHS	exendin-1 - Mexica
26	70	49.3	103	A41410	somatoliberin prec
27	70	49.3	104	A32731	somatoliberin - bo
28	63	44.4	44	1 RHBS	somatoliberin - bo
29	62	43.7	27	1 SECH	secretin - chicken

30 58 40.8 44 1 RHPG
31 58 40.8 108 1 RHHS
32 56 39.4 443 2 C70392
33 55 38.7 206 2 I51301
34 52.5 37.0 266 2 E71612
35 52 36.6 276 2 AD1860
36 51 35.9 27 2 A27267
37 51 35.9 556 2 D88700
38 51 35.9 1359 2 B84645
39 51 35.9 1384 2 T52301
40 50 35.2 168 2 F90095
41 50 35.2 194 2 T27608
42 50 35.2 194 2 T29172
43 50 35.2 418 2 A97300
44 49 34.5 27 1 S07443
45 49 34.5 27 1 SEBO

somatoliberin - pi
somatoliberin prec
gamma-glutamyl pho
riboosomal protein
two-component resp
secretin - dog
protein K02B2.4 [i
hypothetical prote
GYMNOS/PICKLE prot
hypothetical prote
hypothetical prote
hypothetical prote
gamma-glutamyl pho
secretin - human
secretin - bovine

ALIGNMENTS

RESULT 1

B60071

vasoactive intestinal peptide - rhesus macaque

C:Species: Macaca mulatta (rhesus macaque)

C:Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 20-Mar-1998

C:Accession: B60071

R:Yu, J.; Xin, Y.; Eng, J.; Yalow, R.S.

Regul. Pept. 32, 39-45, 1991

A:Title: Rhesus monkey gastroenteropancreatic hormones: relationship to human sequences.

A:Reference number: A60071; MUID:91164506; PMID:2003150

A:Accession: B60071

A:Status: protein sequence not shown

A:Molecule type: protein

A:Residues: 1-28 <YUS>

A:Cross-references: UNIPARC:UPI000002D1C0

A:Note: the sequence is identical with the human sequence

C:Superfamily: glucagon

C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 95.1%; Score 135; DB 2; Length 28;

Best Local Similarity 96.4%; Pred. No. 3.8e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Oy 1 HSDAVFTNRYTRLRKQMAVKYKLYNSILN 28

Db 1 HSDAVFTDNTYTRLRKQMAVKYKLYNSILN 28

RESULT 2

A60304

vasoactive intestinal peptide - dog

N:Alternate names: VIP

C:Species: Canis lupus familiaris (dog)

C:Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change 09-Jul-2004

C:Accession: A60304

R:Eng, J.; Pan, Y.C.E.; Kaufman, J.P.; Yalow, R.S.

Regul. Pept. Suppl. 3, S14, 1985

A:Title: Purification and sequencing of dog and guinea pig VIP's.

A:Reference number: A60304

A:Accession: A60304

A:Molecule type: protein

A:Residues: 1-28 <ENG>

A:Cross-references: UNIPROT:P04565; UNIPARC:UPI000002D1C0

C:Superfamily: glucagon

C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 95.1%;

Best Local Similarity 96.4%; Score 135; DB 2; Length 28;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Oy 1 HSDAVFTNRYTRLRKQMAVKYKLYNSILN 28

Db 1 HSDAVFTDNTYTRLRKQMAVKYKLYNSILN 28

Db 1 HSDAVFTDNTYRLRKQMAVKYLSILN 28

RESULT 3

VRBO

N;Contains: intestinal peptide precursor - bovine (fragments)
 N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
 C;Species: Bos primigenius taurus (cattle)
 C;Date: 26-Apr-1996 #sequence_revision 03-May-1996 #text_change 07-May-1999
 C;Accession: A61643; A61644; S09689
 R;Carlquist, M.; Kaiser, R.; Tatemoto, K.; Joernvall, H.; Mutt, V.
 Eur. J. Biochem. 144, 243-247, 1984
 A;Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper in
 A;Reference number: A61643; MUID:85027215; PMID:6548446
 A;Accession: A61643
 A;Molecule type: protein
 A;Residues: 1-27 <CAR>
 A;Cross-references: UNIPARC:UPI0000173515
 R;Carlquist, M.; Mutt, V.; Joernvall, H.
 FEBS Lett. 108, 457-460, 1979
 A;Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).
 A;Reference number: A61644; MUID:80092152; PMID:520589
 A;Accession: A61644
 A;Molecule type: protein
 A;Residues: 28-55 <CA2>
 A;Cross-references: UNIPARC:UPI000002D1C0
 R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, J.
 Biochim. Biophys. Acta 1038, 355-359, 1990
 A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A;Reference number: S09688; MUID:90254163; PMID:2340294
 A;Contents: annotation; comparison of mammalian PHI sequences
 C;Superfamily: glucagon
 C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
 F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
 F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.1%; Score 135; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 7.7e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNTYRLRKQMAVKYLSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKYLSILN 55

RESULT 4

VRBB

N;Contains: intestinal peptide precursor - rabbit (fragments)
 N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
 C;Species: Oryctolagus cuniculus (domestic rabbit)
 C;Date: 03-Feb-1993 #sequence_revision 19-Apr-1996 #text_change 20-Mar-1998
 C;Accession: B60415; A60415
 R;Gossen, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht, J.
 Peptides 11, 123-128, 1990
 A;Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.
 A;Reference number: A60415; MUID:90259845; PMID:2342988
 A;Accession: B60415
 A;Molecule type: protein
 A;Residues: 1-27 <GOS>
 A;Cross-references: UNIPARC:UPI00000351DB

N;Contains: peptide histidine-isoleucine #status experimental <P27>
 A;Residues: 28-55 <GOS>
 A;Cross-references: UNIPARC:UPI00000351DB
 C;Superfamily: glucagon
 C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
 F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
 F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.1%; Score 135; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 7.7e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNTYRLRKQMAVKYLSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKYLSILN 55

RESULT 5

VRSH

N;Contains: intestinal peptide precursor - sheep (fragments)
 N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
 C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
 C;Date: 31-Mar-1993 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
 C;Accession: B60072; A60072; G61063; A43974
 R;Boujoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.
 Regul. Pept. 32, 169-179, 1991
 A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A;Reference number: A60072; MUID:91239834; PMID:2034821
 A;Accession: B60072
 A;Molecule type: protein
 A;Residues: 1-27 <BOU>
 A;Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515
 A;Accession: A60072
 A;Molecule type: protein
 A;Residues: 28-55 <BO2>
 A;Cross-references: UNIPARC:UPI000002D1C0
 R;Miyata, A.; Jiang, L.; Stibbs, H.H.; Arimura, A.
 Regul. Pept. 38, 145-154, 1992
 A;Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreact
 A;Reference number: A61063; MUID:92245116; PMID:1574609
 A;Accession: G61063
 A;Molecule type: protein
 A;Residues: 28-55 <MIY>
 A;Cross-references: UNIPARC:UPI000002D1C0
 A;Experimental source: hypothalamus, intestine
 R;Gafvelin, G.

Peptides 11, 703-706, 1990
 A;Title: Isolation and primary structure of VIP from sheep brain.
 A;Reference number: A43974; MUID:91045331; PMID:2235680
 A;Accession: A43974
 A;Molecule type: protein
 A;Residues: 28-55 <GAP>
 A;Cross-references: UNIPARC:UPI000002D1C0
 A;Experimental source: brain
 C;Superfamily: glucagon
 C;Keywords: amidated carboxyl end; brain; duplication; hormone; intestine; neuropeptide;
 F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
 F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.1%; Score 135; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 7.7e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNTYRLRKQMAVKYLSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKYLSILN 55

RESULT 6

VRPG

N;Contains: intestinal peptide precursor - pig (fragments)
 N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
 C;Species: Sus scrofa domestica (domestic pig)
 C;Date: 24-Apr-1984 #sequence_revision 05-Jan-1996 #text_change 09-Jul-2004
 C;Accession: A01549; A60300; A01550; J0417; A56754; S09690
 R;Tatemoto, K.; Mutt, V.
 Proc. Natl. Acad. Sci. U.S.A. 78, 6603-6607, 1981
 A;Title: Isolation and characterization of the intestinal peptide porcine PHI (PHI-27),
 A;Reference number: A01549; MUID:82082498; PMID:6947244

A;Accession: A01549
A;Molecule type: protein
A;Residues: 1-27 <TA>
A;Cross-references: UNIPROT:P01284; UNIPARC:UPI00000351DB
R;Tatemoto, K.
Regul. Pept. 6, 330, 1983
A;Title: PHI - a new brain-gut peptide.
A;Reference number: A60300
A;Accession: A60300
A;Molecule type: protein
A;Residues: 1-27 <TA>
A;Cross-references: UNIPARC:UPI00000351DB
R;Mutt, V.; Said, S.I.
Eur. J. Biochem. 42, 581-589, 1974
A;Title: Structure of the porcine vasoactive intestinal octacosapeptide. The amino-acid
A;Reference number: A01550; MUID:74167323; PMID:4829446
A;Accession: A01550
A;Molecule type: protein
A;Residues: 28-55 <MT>
A;Cross-references: UNIPARC:UPI000002D1C0
R;Gaivelin, G.; Andersson, M.; Dimaline, R.; Joernvall, H.; Mutt, V.
Peptides 9, 469-474, 1988
A;Title: Isolation and characterization of a variant form of vasoactive intestinal poly
A;Reference number: JT0417; MUID:88335763; PMID:2843830
A;Accession: JT0417
A;Molecule type: protein
A;Residues: 28-58 <GAF>
A;Cross-references: UNIPARC:UPI000002B99A
A;Note: this extended form is active in a VIP assay but is probably an incompletely pro
R;Bodanzky, M.; Klausner, Y.S.; Lin, C.Y.; Mutt, V.; Said, S.I.
J. Am. Chem. Soc. 96, 4973-4978, 1974
A;Reference number: A26231; MUID:74308014; PMID:4854585
A;Contents: annotation
A;Note: a 28-residue peptide having the sequence and biological activities (in two assay
R;Ichiki, Y.; Kitamura, K.; Kangawa, K.; Kawamoto, M.; Matsuo, H.; Eto, T.
Biochem. Biophys. Res. Commun. 187, 1587-1593, 1992
A;Title: Organ distribution and characterization of porcine peptides (VIP, CGRP and PHI)
A;Reference number: A56754; MUID:93038640; PMID:1329741
A;Accession: A56754
A;Molecule type: protein
A;Residues: 1-24 <ICH>
A;Cross-references: UNIPARC:UPI00000173514
A;Experimental source: duodenum
A;Note: sequence extracted from NCBI backbone (NCBI:P114219)
R;Buscall, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht,
Biochim. Biophys. Acta 1038, 355-359, 1990
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A;Reference number: S09688; MUID:90254163; PMID:2340294
A;Contents: annotation
A;Comment: The biological source of vasoactive intestinal peptide is the duodenal mucosa
of myocardial contractility, stimulation of exocrine pancreatic secretion (in a secretin
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; neuropeptide
F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (asn) (amide in mature form from following gly

Query Match 95.1%; Score 135; DB 1; Length 58;
Best Local Similarity 96.4%; Pred. No. 8.1e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
|||||
Db 28 HSDAVFTDNTYTLRKQMAVKKYLNSILN 55
|||||

RESULT 7
A60038
vasoactive intestinal peptide precursor - crab-eating macaque (fragment)
C;Species: Macaca fascicularis (crab-eating macaque)
C;Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C;Accession: A60038

R;Benson, D.L.; Isackson, P.J.; Jones, E.G.
Brain Res. Mol. Brain Res. 9, 169-174, 1991
A;Title: In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey a
A;Reference number: A60038; MUID:91203476; PMID:1850073
A;Accession: A60038
A;Status: not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-145 <BEN>
A;Cross-references: UNIPROT:Q7M2Y9; UNIPARC:UPI0000017662C
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi

Query Match 95.1%; Score 135; DB 2; Length 145;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
|||||
Db 100 HSDAVFTDNTYTLRKQMAVKKYLNSILN 127
|||||

RESULT 8
VRHU
vasoactive intestinal peptide precursor [validated] - human
N;Alternate names: VIP precursor
N;Contains: peptide histidine-methionine (PHM-27); peptide histidine-valine (PHV-42); va
C;Species: Homo sapiens (man)
C;Date: 14-Nov-1983 #sequence_revision 14-Nov-1983 #text_change 09-Jul-2004
C;Accession: A23296; A93313; A60205; A26361; A27419; JH0518; I51955; I56494; I56988; A01
R;Tsukada, T.; Horovitch, S.J.; Montminy, M.R.; Mandel, G.; Goodman, R.H.
DNA 4, 293-300, 1985
A;Title: Structure of the human vasoactive intestinal polypeptide gene.
A;Reference number: A90952; MUID:86004065; PMID:3899557
A;Accession: A23296
A;Molecule type: DNA
A;Residues: 1-170 <TSU>
A;Cross-references: UNIPROT:P01282; UNIPARC:UPI0000038343; GB:M11553; NID:g340243; PIDN:
R;Itoh, N.; Obata, K.; Yanaihara, N.; Okamoto, H.
Nature 304, 547-549, 1983
A;Title: Human preprovasoactive intestinal polypeptide contains a novel PHI-27-like pept
A;Reference number: A93313; MUID:83271523; PMID:6571696
A;Accession: A93313
A;Molecule type: mRNA
A;Residues: 1-170 <ITO>
A;Cross-references: UNIPARC:UPI000003B343; GB:L00157; GB:J00320; NID:g340277; PIDN:AAA61
E;Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 48, 1136-1141, 1987
A;Title: Vasoactive intestinal peptide gene: putative mechanism of information storage a
A;Reference number: A60205; MUID:87140054; PMID:2434617
A;Accession: A60205
A;Molecule type: mRNA
A;Residues: 78-155 <GOZ>
A;Cross-references: UNIPARC:UPI000016B2F8; GB:M31645; GB:M32162; NID:g340250; PIDN:AAA61
A;Note: this abundant mRNA from a human breast tumor line contains an unspliced intron
R;Linder, S.; Barkhem, T.; Norberg, A.; Persson, H.; Schalling, M.; Hokfelt, T.; Magnus
Proc. Natl. Acad. Sci. U.S.A. 84, 605-609, 1987
A;Title: Structure and expression of the gene encoding the vasoactive intestinal peptide
A;Reference number: A26361; MUID:87092456; PMID:3025882
A;Accession: A26361
A;Molecule type: DNA
A;Residues: 1-115, 'L', 117-135, 'G', 137-170 <LIN>
A;Cross-references: UNIPARC:UPI000016B2FA; GB:M14623; NID:g340271; PIDN:AAA61288.1; PID:
A;Note: the authors translated the codon TTA for residue 116 as Ser and GGC for residue
R;Yiangou, Y.; Di Marzo, V.; Spokes, R.A.; Panico, M.; Morris, H.R.; Bloom, S.R.
J. Biol. Chem. 262, 14010-14013, 1987
A;Title: Isolation, characterization, and pharmacological actions of peptide histidine v
A;Reference number: A27419; MUID:88007645; PMID:3654650
A;Accession: A27419
A;Molecule type: protein
A;Residues: 81-122 <YIA>
A;Cross-references: UNIPARC:UPI00000351DE
R;Kitamura, K.; Kangawa, K.; Kawamoto, M.; Ichiki, Y.; Matsuo, H.; Eto, T.

Biochem. Biophys. Res. Commun. 185, 134-141, 1992
A;Title: Isolation and characterization of peptides which act on rat platelets, from a P
A;Reference number: JH0618; MUID:92287083; PMID:1318039
A;Accession: JH0618
A;Molecule type: protein
A;Residues: 125-152 <K1T>
A;Cross-references: UNIPARC:UPI000002D1C0
A;Experimental source: pheochromocytoma
R;Yamagami, T.; Ohsawa, K.; Nishizawa, M.; Inoue, C.; Gotoh, E.; Yanaihara, N.; Yamamoto
Ann. N. Y. Acad. Sci. 527, 87-102, 1998
A;Title: Complete nucleotide sequence of human vasoactive intestinal peptide/PHM-27 gene
A;Reference number: 151955; MUID:8262775; PMID:2839091
A;Accession: 151955
A;Status: translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 1-170 <RES>
A;Cross-references: UNIPARC:UPI000003B343; GB:M33027; NID:g340253; PIDN:AAA69515.1; PID:
R;Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 47, 1136-1141, 1987
A;Title: Vasoactive intestinal peptide gene: Putative mechanism of information storage a
A;Reference number: 156494
A;Accession: 156494
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 78-155 <RE2>
A;Cross-references: UNIPARC:UPI000016B2F8; GB:M32162; NID:g340250; PIDN:AAA61285.1; PID:
R;Bloom, S.R.; Christofides, N.D.; Delamarter, J.; Buell, G.; Kawashima, E.; Polak, J.M.
Lancet 2, 1163-1165, 1983
A;Title: Diarrhoea in vipoma patients associated with cosecretion of a second active pep
A;Reference number: 156988; MUID:84066682; PMID:6139527
A;Accession: 156988
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: mRNA
A;Residues: 50-170 <RE3>
A;Cross-references: UNIPARC:UPI000016B2F7; GB:M54930; NID:g340247; PIDN:AAA63268.1; PID:
C;Genetics:
A;Gene: GDB:VIP
A;Cross-references: GDB:120490; OMIM:192320
A;Map position: 6q26-q27
A;Introns: 36/2; 77/2; 112/2; 156/2
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; glycoprotein; hormone; intestine; neuro
F;1-20/Domain: signal sequence #status predicted <SIG>
F;81-122/Product: peptide histidine-valine (PHV-42) #status experimental <PHV>
F;81-107/Product: peptide histidine-methionine (PHM-27) #status experimental <PHM>
F;125-152/Product: vasoactive intestinal peptide #status experimental <VIP>
F;68-133/Binding site: carboxylate (Asn) (covalent) #status predicted
F;107/Modified site: amidated carboxyl end (Met) (amide in mature form from following gl
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 95.1%; Score 135; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTNRYTLRKQMAVKYLSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKYLSILN 152
RESULT 9
VRRT
vasoactive intestinal peptide precursor - rat
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 28-Feb-1986 #sequence revision 30-Jun-1993 #text change 09-Jul-2004
C;Accession: A60053; B60037; A01548; A28102; A60586; A60587; S09691
R;Giladi, E.; Shani, Y.; Gozes, I.
Brain Res. Mol. Brain Res. 7, 261-267, 1990
A;Title: The complete structure of the rat VIP gene.
A;Reference number: A60053; MUID:90244869; PMID:2159586
A;Accession: A60053
A;Molecule type: DNA
A;Residues: 1-170 <GIL>

A;Cross-references: UNIPROT:P01283; UNIPARC:UPI000013884A
A;Note: the authors translated the codon GAG for residue 67 as Gln
R;Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A;Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A;Reference number: A60037; MUID:91232388; PMID:1851524
A;Accession: B60037
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 78-155 <LAM>
A;Cross-references: UNIPARC:UPI0000173511
R;Nishizawa, M.; Hayakawa, Y.; Yanaihara, N.; Okamoto, H.
FEBS Lett. 183, 55-59, 1985
A;Title: Nucleotide sequence divergence and functional constraint in VIP precursor mRNA
A;Reference number: A01548; MUID:85154612; PMID:3838518
A;Accession: A01548
A;Molecule type: mRNA
A;Residues: 9-170 <NIS>
A;Cross-references: UNIPARC:UPI0000170BA3; GB:X02341; NID:g57481; PIDN:CAA26200.1; PID:g
A;Experimental source: cerebral cortex
R;Goetzl, E.J.; Sreedharan, S.P.; Turck, C.W.
J. Biol. Chem. 263, 9083-9086, 1988
A;Title: Structurally distinctive vasoactive intestinal peptides from rat basophilic leu
A;Reference number: A28102; MUID:88243784; PMID:3379062
A;Accession: A28102
A;Molecule type: protein
A;Residues: 134-152 <GOB>
A;Cross-references: UNIPARC:UPI00000351E4
A;Note: the source of this novel short form of VIP was rat basophilic leukemia cells
R;Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Rathe, J.; Robberecht, P.; Chris
Endocrinology 125, 1296-1302, 1989
A;Title: Peptide histidine isoleucinamide (PHI)-(1-27)-Gly as a new major form of PHI in
A;Reference number: A60586; MUID:89338237; PMID:2759027
A;Accession: A60586
A;Molecule type: protein
A;Residues: 81-108 <CAU>
A;Cross-references: UNIPARC:UPI0000173512
R;Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Robberecht, P.; Christophe, J.
Endocrinology 125, 2645-2655, 1989
A;Title: Variable distribution of three molecular forms of peptide histidine isoleucinam
A;Reference number: A60587; MUID:90005222; PMID:2792003
A;Accession: A60587
A;Molecule type: protein
A;Residues: 81-122 <CA2>
A;Cross-references: UNIPARC:UPI0000173513
R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gossens, D.; de Neef, P.; Rathe, J.; Robberecht, P.
Biochim. Biophys. Acta 1038, 355-359, 1990
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A;Reference number: S09688; MUID:90254163; PMID:2340294
A;Contents: annotation; comparison of mammalian PHI sequences
C;Comment: Two active peptides are released from the VIP precursor by cleavage at paired
C;Genetics:
A;Introns: 36/2; 77/2; 156/2
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
F;1-21/Domain: signal sequence #status predicted <SIG>
F;81-122/Product: PHI-42 #status experimental <PH42>
F;81-108/Product: PHI-27-Gly #status experimental <PHIG>
F;81-107/Product: peptide histidine-isoleucine (PHI-27) #status predicted <PHI>
F;125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F;107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
F;133/Binding site: carboxylate (Asn) (covalent) #status predicted
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 95.1%; Score 135; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTNRYTLRKQMAVKYLSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKYLSILN 152

RESULT 10
A60307
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; cortex; glycoprotein; hormone;
F:1-27/Product: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Mus musculus (house mouse)
C:Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C:Accession: A60307; I49386
R:Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A:Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A:Reference number: A60307; MUID:91232388; PMID:1851524
A:Accession: A60307
A:Status: not compared with conceptual translation
A:Residues: 1-170 <LAM>
A:Molecule type: DNA
A:Cross-references: UNIPROT:P32648; UNIPARC:UPI000002171F
R:Sena, M.; Bravo, D.T.; Von Agoston, D.; Waschek, J.A.
DNA Seq. 5, 25-29, 1994
A:Title: High conservation of upstream regulatory sequences on the human and mouse vasoa
A:Reference number: I49386; MUID:95201289; PMID:7894056
A:Accession: I49386
A:Status: preliminary; translated from GB/EMBL/DBDJ
A:Molecule type: DNA
A:Residues: 1-35 <RES>
A:Cross-references: UNIPARC:UPI000016D189; EMBL:X74297; NID:G95871; PIDN:CMAS2350.1; PI
C:Comment: Two active peptides are released from the VIP precursor by cleavage at paired
C:Genetics:
A:Gene: VIP
A:Superfamily: glucagon
C:Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
F:1-21/Domain: signal sequence #status predicted <SIG>
F:1-107/Product: PHI-27 #status predicted <PHI>
F:125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F:107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
F:133/Binding site: carbohydrate (Asn) (covalent) #status predicted
F:152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 95.1%; Score 135; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152
RESULT 11
VRGP
vasoactive intestinal peptide precursor - guinea pig (fragments)
N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Cavia porcellus (guinea pig)
C:Date: 31-Mar-1988 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
C:Accession: A26175; S09688; A57082; B60304
R:Du, B.H.; Eng, J.; Hulmes, J.D.; Chang, M.; Pan, Y.C.B.; Yalow, R.S.
Biochem. Biophys. Res. Commun. 128, 1093-1098, 1985
A:Title: Guinea pig has a unique mammalian VIP.
A:Reference number: A26175; MUID:85225523; PMID:4004849
A:Accession: A26175
A:Molecule type: protein
A:Residues: 28-55 <DUB>
A:Cross-references: UNIPROT:P04566; UNIPARC:UPI0000035182
R:Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Robberecht,
Biochim. Biophys. Acta 1038, 355-359, 1990
A:Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A:Reference number: S09688; MUID:90254163; PMID:2340294
A:Accession: S09688
A:Molecule type: protein
A:Residues: 1-27 <BUS>
A:Cross-references: UNIPARC:UPI0000173516
A:Accession: A57082
A:Molecule type: protein
A:Residues: 28-55 <BU2>
A:Cross-references: UNIPARC:UPI0000173516

C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; intestine; hormone; neuropeptide; vasodi
F:1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F:55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental
Query Match 85.9%; Score 122; DB 1; Length 55;
Best Local Similarity 82.1%; Pred. No. 6e-11;
Matches 23; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
DB 28 HSDALFTDITYTLRKQMAVKKYLNSVLN 55
RESULT 12
VRCH
vasoactive intestinal peptide precursor - chicken
C:Species: Gallus gallus (chicken)
C:Date: 24-Apr-1984 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C:Accession: S47470; A91425; A90720; A01551
R:Talbot, R.T.; Dunn, I.C.; Wilson, P.W.; Sang, H.M.; Sharp, P.J.
submitted to the EMBL Data Library, August 1994
A:Description: Evidence for alternative splicing of the chicken VIP gene.
A:Reference number: S47470
A:Accession: S47470
A:Molecule type: mRNA
A:Residues: 1-165 <TAL>
A:Cross-references: UNIPROT:P48143; UNIPARC:UPI000002B6C3; EMBL:X80906; NID:G531364; PID
R:Nilsson, A.
FEBS Lett. 60, 322-326, 1975
A:Title: Structure of the vasoactive intestinal octacosapeptide from chicken intestine.
A:Reference number: A91425; MUID:76210823; PMID:1227973
A:Accession: A91425
A:Molecule type: protein
A:Residues: 94-121 <NIL>
A:Cross-references: UNIPARC:UPI00000351E1
R:Bohdansky, M.; Lin, C.Y.; Viotakis, A.E.; Mutt, V.; Said, S.I.
Bioorg. Chem. 5, 339-350, 1976
A:Title: Vasoactive intestinal peptide (VIP) from chicken. Synthesis and properties of t
A:Reference number: A90720
A:Contents: synthesis
A:Accession: A90720
A:Molecule type: protein
A:Residues: 107-121 <BOD>
A:Cross-references: UNIPARC:UPI0000173517
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; neuropeptide
F:1-25/Domain: signal sequence #status predicted <SIG>
F:94-121/Product: vasoactive intestinal peptide #status experimental <MAT>
F:121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following gl
Query Match 84.5%; Score 120; DB 1; Length 165;
Best Local Similarity 85.2%; Pred. No. 3.7e-10;
Matches 23; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
QY 1 HSDAVFTNRYTLRKQMAVKKYLNSIL 27
DB 94 HSDAVFTDNYSRFRKQMAVKKYLNSVL 120
RESULT 13
A60303
vasoactive intestinal peptide - smaller spotted catshark
C:Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish)
C:Date: 10-Nov-1992 #sequence_revision 10-Nov-1992 #text_change 09-Jul-2004
C:Accession: A60303; A60314; S07432
R:Dimaline, R.; Thwaites, D.T.; Young, J.; Lee, C.M.; Thorndyke, M.C.
Regul. Pept. 18, 356, 1987
A:Title: A novel family of VIP-like peptides from the dogfish Scyliorhinus canicula.
A:Reference number: A60303
A:Accession: A60303

A;Molecule type: protein
A;Residues: 1-28 <DIM>
A;Cross-references: UNIPROT:P09685; UNIPARC:UPI0000013884B
A;Note: This reference is an abstract
R;Dimaline, R.; Thorndyke, M.C.; Young, J.
Regul. Pept. 14, 1-10, 1986
A;Title: Isolation and partial sequence of elasmobranch VIP.
A;Reference number: A60314; MUID:86234323; PMID:3715063
A;Accession: A60314
A;Molecule type: protein
A;Residues: 1-10 <DI2>
A;Cross-references: UNIPARC:UPI000017662D
R;Dimaline, R.; Young, J.; Thwaites, D.T.; Lee, C.M.; Thorndyke, M.C.
Ann. N. Y. Acad. Sci. 527, 621-623, 1988
A;Title: Amino acid sequence of a biologically active vasoactive intestinal peptide from
A;Reference number: S07432
A;Accession: S07432
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-28 <DI3>
A;Cross-references: UNIPARC:UPI000013884B
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; intestine; neuropeptide
F;28/Modified site: amidated carboxyl end (Ala) #status experimental

Query Match 83.8%; Score 119; DB 2; Length 28;
Best Local Similarity 81.5%; Pred. No. 8.2e-11;
Matches 22; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSIL 27
||||| :|:|:|:|:|:|:|:|:|:|:
Db 1 HSDAVFTDNYSRIRKQMAVKKYNSLL 27

RESULT 14
A38232
vasoactive intestinal peptide - North American opossum
N/Alternate names: VIP
C;Species: Didelphis virginiana, Didelphis marsupialis virginiana (North American opossum)
C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004
C;Accession: A38232
R;Eng, J.; Yu, J.; Rattan, S.; Yalow, R. S.
Proc. Natl. Acad. Sci. U.S.A. 89, 1809-1811, 1992
A;Title: Isolation and amino acid sequences of opossum vasoactive intestinal polypeptide
A;Reference number: A38232; MUID:92179271; PMID:1542675
A;Accession: A38232
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-28 <ENG>
A;Cross-references: UNIPROT:P39089; UNIPARC:UPI0000138846
A;Note: sequence extracted from NCBI backbone (NCBIP:87215)
C;Superfamily: glucagon
C;Keywords: duplication; intestine; neuropeptide

Query Match 78.9%; Score 112; DB 2; Length 28;
Best Local Similarity 78.6%; Pred. No. 8.6e-10;
Matches 22; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSIL 28
||||| :|:|:|:|:|:|:|:|:|:|:
Db 1 HSDAVFTDSYTRLLKQMAVKKYLDSIL 28

RESULT 15
JQ0361
vasoactive intestinal peptide - Atlantic cod (fragment)
C;Species: Gadus morhua (Atlantic cod)
C;Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 09-Jul-2004
C;Accession: JQ0361
R;Thwaites, D.T.; Young, J.; Thorndyke, M.C.; Dimaline, R.
Regul. Pept. 21, 436, 1988
A;Title: Isolation and characterisation of two teleost VIP's.
A;Reference number: JQ0361

A;Accession: JQ0361
A;Molecule type: protein
A;Residues: 1-25 <THW>
A;Cross-references: UNIPROT:P09684; UNIPARC:UPI0000138847
C;Superfamily: glucagon
C;Keywords: duplication; intestine; neuropeptide

Query Match 76.8%; Score 109; DB 2; Length 25;
Best Local Similarity 84.0%; Pred. No. 2.1e-09;
Matches 21; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNS 25
||||| :|:|:|:|:|:|:|:|:|:|:
Db 1 HSDAVFTDNYSRFRKQMAVKKYLNS 25

Search completed: January 25, 2006, 15:20:37
Job time : 13.25 secs

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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:54:02 ; Search time 76 Seconds
(without alignments)
259.931 Million cell updates/sec

Title: US-10-626-719-5

Perfect score: 142

Sequence: 1 HSDAVFTNRYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : UniProt_05.80.*

1: uniprot_sprot.*

2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	ID	Description
1	135	95.1	28	VIP_CANFA	P63289 canis famil
2	135	95.1	28	VIP_CAPHI	P63290 capra hircu
3	135	95.1	28	VIP_MACMU	P84488 macaca mula
4	135	95.1	28	VIP_SHEEP	P63291 ovis aries
5	135	95.1	72	VIP_PIG	P01284 sus scrofa
6	135	95.1	72	VIP_RABIT	P32649 oryctolagus
7	135	95.1	118	Q5TCY7_HUMAN	Q5TCY7 homo sapien
8	135	95.1	145	Q7M2Y9_MACFA	Q7M2Y9 macaca fasc
9	135	95.1	153	Q7TSR4_9MURI	Q7TSR4 arvicanthis
10	135	95.1	169	Q5TCY8_HUMAN	Q5TCY8 homo sapien
11	135	95.1	170	VIP_BOVIN	P81401 bos taurus
12	135	95.1	170	VIP_HUMAN	P01282 homo sapien
13	135	95.1	170	VIP_MOUSE	P32648 mus musculus
14	135	95.1	170	VIP_RAT	P01283 rattus norv
15	135	95.1	170	Q5TCY9_HUMAN	Q5TCY9 homo sapien
16	135	95.1	171	Q9D2Z7_MOUSE	Q9D2Z7 mus musculus
17	122	85.9	72	VIP_CANFO	P04566 cavia porce
18	120	84.5	28	VIP_ALLMI	P48142 alligator m
19	120	84.5	28	VIP_RANRI	P81016 rana ridibu
20	120	84.5	70	Q4TZX3_ANAPL	Q4TZX3 anas platyr
21	120	84.5	86	Q4TZY9_9AVES	Q4TZY9 anser anser
22	120	84.5	200	VIP_CHICK	P48143 gallus gall
23	120	84.5	200	VIP_MELGA	P45644 meleagris g
24	120	84.5	202	Q7ZTG8_XENLA	Q7ZTG8 xenopus lae
25	119	83.8	28	VIP_SCYCA	P09685 scylliorhinu
26	119	83.8	28	Q9PRI9_AMICA	Q9PRI9 amia calva
27	119	83.8	147	Q4SON2_TETNG	Q4SON2 tetraodon n
28	115	81.0	28	Q9PRN8_CARAU	Q9PRN8 carassius a
29	112	78.9	28	VIP_DIDMA	P35089 didelphis m
30	109	76.8	25	VIP_GADMO	P09684 gadus morhua
31	102	71.8	38	Q75W85_MISAN	Q75W85 misgurnus a

32	99	69.7	172	2	Q9DE29_BRARE	Q9DE29 brachydanio
33	99	69.7	199	2	Q5XJ29_BRARE	Q5XJ29 brachydanio
34	98	69.0	38	2	Q75W94_HALRO	Q75W94 halocynthia
35	98	69.0	38	2	O8IU36_PERAM	O8IU36 periplaneta
36	98	69.0	38	2	O8IU37_SEPLE	O8IU37 sepioteuthi
37	98	69.0	38	2	O8IU38_HYDMA	O8IU38 hydra magni
38	98	69.0	38	2	O8IU39_DUGJA	O8IU39 dugesia jap
39	98	69.0	38	2	Q75W87_ONCMY	Q75W87 oncornynchu
40	98	69.0	38	2	Q75W90_STELE	Q75W90 sardinops m
41	98	69.0	38	2	Q75W92_9PERC	Q75W92 stephanolep
42	98	69.0	38	2	O8AYP4_ACISC	O8AYP4 acipenser s
43	98	69.0	38	2	O8AYP5_TRAJP	O8AYP5 trachurus j
44	98	69.0	62	2	Q53B12_9PRIM	Q53B12 gorilla gor
45	98	69.0	62	2	Q53B13_PONPY	Q53B13 pongo pygma

ALIGNMENTS

RESULT 1

VIP_CANFA

ID VIP CANFA STANDARD; PRT; 28 AA.

AC P63289; P04565;

DT 13-AUG-1987 (Rel. 05, Created)

DT 13-AUG-1987 (Rel. 05, Last sequence update)

DT 13-SEP-2005 (Rel. 48, Last annotation update)

DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal

DE polypeptide).

GN Name:VIP;

OS Canis familiaris (Dog).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;

OC Canis.

OX NCBI_TaxID=9615;

RN 11

RP PROTEIN SEQUENCE.

RX MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;

RA Eng J.; Du B.-H.; Raufman J.-P.; Yalow R.S.;

RT "Purification and amino acid sequences of dog, goat and guinea pig

RT VIPs."

RL Peptides 7 Suppl. 1:17-20(1986).

CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,

CC stimulates myocardial contractility, increases glycolysis and

CC relaxes the smooth muscle of trachea, stomach and gall bladder.

CC -!- SUBCELLULAR LOCATION: Secreted.

CC -!- SIMILARITY: Belongs to the glucagon family.

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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -

CC the European Bioinformatics Institute. There are no restrictions on its

CC use as long as its content is in no way modified and this statement is not

CC removed.

CC -----

CC PIR; A60304; A60304.

CC HSSP; P18509; 1GEA.

CC Ensembl; ENSCAFG0000000538; Canis familiaris.

CC InterPro; IPR000532; Glucagon.

CC Pfam; PF00123; Hormone 2; 1.

CC PRINTS; PR00275; GLUCAGON.

CC SMART; SM00070; GLUCA; 1.

CC PROSITE; PS00260; GLUCAGON; 1.

CC Amidation; Direct protein sequencing; Glucagon family; Hormone.

FT MOD_RES 28

SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF63F CRC64;

Query Match 95.1%; Score 135; DB 1; Length 28;

Best Local Similarity 96.4%; Pred. No. 7.3e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKYLSILN 28

Db 1 HSDAVFTNRYTLRKQMAVKYLSILN 28

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RESULT 2
VIP_CAPHI
ID_VIP_CAPHI STANDARD; PRT; 28 AA.
AC P63290; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Names=VIP;
OS Capra hircus (Goat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Capra.
OX NCBI_TaxID=9925;
[1]
RN PROTEIN SEQUENCE.
RP MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;
RX Eng J., Du B.-H., Raufman J.-P., Yalow R.S.;
RT "Purification and amino acid sequences of dog, goat and guinea pig
RT VIPs.";
RL Peptides 7 Suppl. 1:17-20(1986).
CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the glucagon family.
-----
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CC removed.
-----
CC HSPG; P18509; LGEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD RES 28
FT SEQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;
Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.3e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
-----
RESULT 3
VIP_MACMU
ID_VIP_MACMU STANDARD; PRT; 28 AA.
AC P84488;
DT 13-SEP-2005 (Rel. 48, Created)
DT 13-SEP-2005 (Rel. 48, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name=VIP;
OS Macaca mulatta (Rhesus macaque).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopithecoidea; Cercopithecinae; Macaca.
OX NCBI_TaxID=9544;
[1]
RN PROTEIN SEQUENCE.
RP MEDLINE=91164506; PubMed=2003150; DOI=10.1016/0167-0115(91)90005-2;
RX Yu J.-H., Xin Y., Eng J., Yalow R.S.;
RA Yu J.-H., Xin Y., Eng J., Yalow R.S.;

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RL Regul. Pept. 38:145-154 (1992).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC removed.
CC -----
DR PIR; B60072; VRSH.
DR HSP; P18509; IGEA.
DR InterPro; IPR00532; Glucagon.
DR Pfam; PF00123; Hormone_2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUC; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD RES 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;

Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.3e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNNTYRLRKQMAVKYLSILN 28
Db 1 HSDAVFTNNTYRLRKQMAVKYLSILN 28

RESULT 5
ID_VIP_PIG STANDARD; PRT; 72 AA.
AC P01284; QTRNO;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
DE (Vasoactive intestinal polypeptide)] (Fragment).
GN Name=VIP;
OS Sus scrofa (Pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
OC Sus.
OX NCBI_TaxID=9823;
RN [1]
RP PROTEIN SEQUENCE OF 1-27.
RX MEDLINE=82082498; PubMed=6947244;
RA Tatamoto K., Mutt V.;
RT "Isolation and characterization of the intestinal peptide porcine PHI
RT (PHI-27), a new member of the glucagon-secretin family.";
RL Proc. Natl. Acad. Sci. U.S.A. 78:6603-6607 (1981).
RN [2]
RP PROTEIN SEQUENCE OF 1-24.
RC TISSUE=Duodenum;
RX MEDLINE=93038640; PubMed=1329741;
RA Ichiki Y., Kitamura K., Kangawa K., Kawamoto M., Matsuo H., Eto T.;
RT "Organ distribution and characterization of porcine peptides (VIP,
RT CGRP and PHI) that increase cAMP in rat platelets";
RL Biochem. Biophys. Res. Commun. 187:1587-1593 (1992).
RN [3]
RP PROTEIN SEQUENCE OF 28-58.
RX MEDLINE=88335763; PubMed=2843830; DOI=10.1016/0196-9781(88)90149-0;
RA Gavellin G., Andersson M., Dimoline R., Jornvall H., Mutt V.;
RT "Isolation and characterization of a variant form of vasoactive
RT intestinal polypeptide";
RL Peptides 9:463-474 (1988).
RN [4]
RP PROTEIN SEQUENCE OF 45-72.

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RX MEDLINE=74167323; PubMed=4829446;
RA Mutt V., Said S.I.;
RT "Structure of the porcine vasoactive intestinal octacosapeptide. The
RT amino-acid sequence. Use of kallikrein in its determination.";
RL Eur. J. Biochem. 42:581-589 (1974).
RN [5]
RP SYNTHESIS OF VIP.
RX MEDLINE=74308014; PubMed=4854585;
RA Bodanszky M., Klausner Y.S., Lin C.Y., Mutt V., Said S.I.;
RT "Synthesis of the vasoactive intestinal peptide (VIP).";
RL J. Am. Chem. Soc. 96:4973-4978 (1974).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC removed.
CC -----
DR PIR; A01549; VRPG.
DR HSP; P18509; IGEA.
DR InterPro; IPR00532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone.
FT PEPTIDE 1 27 Intestinal peptide PHI-27.
FT MOD RES 45 72 Vasoactive intestinal peptide.
FT MOD RES 27 72 Isoleucine amide.
FT MOD RES 72 72 Asparagine amide.
FT NON TER 1 1
FT NON TER 72 72
SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;

Query Match 95.1%; Score 135; DB 1; Length 72;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNNTYRLRKQMAVKYLSILN 28
Db 45 HSDAVFTNNTYRLRKQMAVKYLSILN 72

RESULT 6
ID_VIP_RABIT STANDARD; PRT; 72 AA.
AC P32649;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
DE (Vasoactive intestinal polypeptide)] (Fragment).
GN Name=VIP;
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
OC Oryctolagus.
OX NCBI_TaxID=9986;
RN [1]
RP PROTEIN SEQUENCE.
RC TISSUE=Small intestine;
RX MEDLINE=90259845; PubMed=2342988; DOI=10.1016/0196-9781(90)90120-T;
RA Gossen D., Buscall L., Cauvin A., Gourlet P., de Neef P., Rathe J.,
RA Robberecht P., Vandermeers-Piret M.C., Vandermeers A., Christophe J.;

```

"Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine."
 Peptides 11:123-128(1990).
 -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
 -!- FUNCTION: PHI also causes vasodilation.
 -!- SUBCELLULAR LOCATION: Secreted.
 -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.
 -!- SIMILARITY: Belongs to the glucagon family.

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 HSSP; P18509; IGEA.
 InterPro; IPR000532; Glucagon.
 Pfam; PF00123; Hormone 2; 2.
 PRINTS; PR00275; GLUCAGON.
 PROSITE; PS00260; GLUCAGON; 2.
 KW Amidation; Cleavage on pair of basic residues;
 Direct protein sequencing; Glucagon family; Hormone.
 FT PEPTIDE 1 27 Intestinal peptide PHI-27.
 FT PEPTIDE 45 72 Vasoactive intestinal peptide.
 FT MOD_RES 27 27 Isoleucine amide.
 FT MOD_RES 72 72 Asparagine amide.
 FT NON_TER 1 1
 FT NON_TER 72 72
 SQ SEQUENCE 72 AA; 8198 MW; EF03B1F055C1CA3A CRC64;

 Query Match 95.1%; Score 135; DB 1; Length 72;
 Best Local Similarity 96.4%; Pred. No. 2e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

 QY 1 HSDAVFTNRYTRLRKQMAVKKYLNSILN 28
 |||||
 Db 45 HSDAVFTDNYTRLRKQMAVKKYLNSILN 72
 |||||

 RESULT 7
 Q5TCY7 HUMAN
 ID Q5TCY7 HUMAN PRELIMINARY; PRT; 118 AA.
 AC Q5TCY7;
 DT 01-FEB-2005 (TrEMBLrel. 29, Created)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
 DE Vasoactive intestinal peptide (Fragment).
 GN Names=VIP; ORFNames=RP4-546K19.1-003;
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini; Hominidae;
 OC Homo.
 OC NCBI_TaxID=9606;
 [1]
 RN NUCLEOTIDE SEQUENCE.
 RA Johnson C.;
 RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AL13356; CA121766.1; -; Genomic DNA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR SMART; SM00070; GLUCA; 2.
 DR PROSITE; PS00260; GLUCAGON; 2.
 FT NON_TER 1 1
 FT NON_TER 118 118
 SQ SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;

 Query Match 95.1%; Score 135; DB 2; Length 118;
 Best Local Similarity 96.4%; Pred. No. 3.4e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

 RT intestine."
 RL Peptides 11:123-128(1990).
 CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycogenolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -!- FUNCTION: PHI also causes vasodilation.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
 CC with the human precursor sequence.
 CC -!- SIMILARITY: Belongs to the glucagon family.

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 CC use as long as its content is in no way modified and this statement is not
 CC removed.

 HSSP; P18509; IGEA.
 InterPro; IPR000532; Glucagon.
 Pfam; PF00123; Hormone 2; 2.
 PRINTS; PR00275; GLUCAGON.
 PROSITE; PS00260; GLUCAGON; 2.
 KW Amidation; Cleavage on pair of basic residues;
 Direct protein sequencing; Glucagon family; Hormone.
 FT PEPTIDE 1 27 Intestinal peptide PHI-27.
 FT PEPTIDE 45 72 Vasoactive intestinal peptide.
 FT MOD_RES 27 27 Isoleucine amide.
 FT MOD_RES 72 72 Asparagine amide.
 FT NON_TER 1 1
 FT NON_TER 72 72
 SQ SEQUENCE 72 AA; 8198 MW; EF03B1F055C1CA3A CRC64;

 Query Match 95.1%; Score 135; DB 1; Length 72;
 Best Local Similarity 96.4%; Pred. No. 2e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

 QY 1 HSDAVFTNRYTRLRKQMAVKKYLNSILN 28
 |||||
 Db 45 HSDAVFTDNYTRLRKQMAVKKYLNSILN 72
 |||||

 RESULT 7
 Q5TCY7 HUMAN
 ID Q5TCY7 HUMAN PRELIMINARY; PRT; 118 AA.
 AC Q5TCY7;
 DT 01-FEB-2005 (TrEMBLrel. 29, Created)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
 DE Vasoactive intestinal peptide (Fragment).
 GN Names=VIP; ORFNames=RP4-546K19.1-003;
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini; Hominidae;
 OC Homo.
 OC NCBI_TaxID=9606;
 [1]
 RN NUCLEOTIDE SEQUENCE.
 RA Johnson C.;
 RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AL13356; CA121766.1; -; Genomic DNA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR SMART; SM00070; GLUCA; 2.
 DR PROSITE; PS00260; GLUCAGON; 2.
 FT NON_TER 1 1
 FT NON_TER 118 118
 SQ SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;

 Query Match 95.1%; Score 135; DB 2; Length 118;
 Best Local Similarity 96.4%; Pred. No. 3.4e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

 QY 1 HSDAVFTNRYTRLRKQMAVKKYLNSILN 28
 |||||
 Db 74 HSDAVFTDNYTRLRKQMAVKKYLNSILN 101
 |||||

 RESULT 8
 Q7M2Y9 MACFA
 ID Q7M2Y9 MACFA PRELIMINARY; PRT; 145 AA.
 AC Q7M2Y9;
 DT 01-MAR-2004 (TrEMBLrel. 26, Created)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
 DE Vasoactive intestinal peptide precursor (Fragment).
 OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini;
 OC Cercopithecoidea; Cercopithecinae; Macaca.
 OC NCBI_TaxID=9541;
 [1]
 RN NUCLEOTIDE SEQUENCE.
 RA MEDLINE=91203476; PubMed=1850073; DOI=10.1016/0169-328X(91)90145-N;
 RA Benson D.L., Isackson P.J., Jones E.G.;
 RA "In situ hybridization reveals VIP precursor mRNA-containing neurons
 RT in monkey and rat neocortex."
 RL Brain Res. Mol. Brain Res. 9:169-174(1991).
 DR PIR; A60038; A60038.
 DR HSSP; P18509; IGEA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 FT NON_TER 1 1
 FT NON_TER 145 145
 SQ SEQUENCE 145 AA; 16324 MW; IABESD98D853FESC CRC64;

 Query Match 95.1%; Score 135; DB 2; Length 145;
 Best Local Similarity 96.4%; Pred. No. 4.2e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

 QY 1 HSDAVFTNRYTRLRKQMAVKKYLNSILN 28
 |||||
 Db 100 HSDAVFTDNYTRLRKQMAVKKYLNSILN 127
 |||||

 RESULT 9
 Q7TSR4 9MURI
 ID Q7TSR4 9MURI PRELIMINARY; PRT; 153 AA.
 AC Q7TSR4;
 DT 01-OCT-2003 (TrEMBLrel. 25, Created)
 DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
 DE Vasoactive intestinal polypeptide (Fragment).
 OS Arvicanthus ansorgei.
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Euthera; Euarchontoglires; Glires; Rodentia; Sciurognathi;
 OC Muridae; Murinae; Arvicanthis.
 OC NCBI_TaxID=204747;
 [1]
 RN NUCLEOTIDE SEQUENCE.
 RA Dardente H., Menet J.S., Tournier B.B., Challet E., Pavet P.,
 RA Masson-Pevet M.;
 RA Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AY225375; AAP15167.1; -; mRNA.
 DR HSSP; P18509; IGEA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.

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DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON TER 1
SQ SEQUENCE 153 AA; 17171 MW; 9C15095D6E147A15 CRC64;

  Query Match      95.1%; Score 135; DB 2; Length 153;
  Best Local Similarity 96.4%; Pred. No. 4.4e-12;
  Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
  ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 108 HSDAVFTDNYTLRKQMAVKKYLNSILN 135

RESULT 10
Q5TCY8 HUMAN
ID Q5TCY8 HUMAN PRELIMINARY; PRT; 169 AA.
AC Q5TCY8
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-002;
OS Homo sapiens (Human)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CAI21765.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 169 AA; 19081 MW; F325BDFEF47132C3 CRC64;

  Query Match      95.1%; Score 135; DB 2; Length 169;
  Best Local Similarity 96.4%; Pred. No. 4.9e-12;
  Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
  ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 124 HSDAVFTDNYTLRKQMAVKKYLNSILN 151

RESULT 11
VIP_BOVIN
ID VIP_BOVIN STANDARD; PRT; 170 AA.
AC P81401; Q8MI77;
DT 15-DEC-1998 (Rel. 37, Created)
DT 25-OCT-2004 (Rel. 45, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
DE (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Bos taurus (Bovine)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=2209342; PubMed=12097482;
RA Hamelink C., Lee H.-W., Chen Y., Grimaldi M., Eiden L.E.;
RT "Coincident elevation of cAMP and calcium influx by PACAP-27
RT synergistically regulates vasoactive intestinal polypeptide gene
RT transcription through a novel PKA-independent signaling pathway.";
RL J. Neurosci. 22:5310-5320(2002).
RN [2]
RP PROTEIN SEQUENCE OF 81-107.
RC TISSUE=Duodenum;

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RX MEDLINE=85027215; PubMed=6548446;
RA Carlquist M., Kaiser R., Tatemoto K., Joernvall H., Mutt V.;
RT "A novel form of the polypeptide PHI isolated in high yield from
RT bovine upper intestine. Relationships to other peptides of the
RT glucagon-secretin family.";
RL Eur. J. Biochem. 144:243-247(1984).
RN [3]
RP PROTEIN SEQUENCE OF 125-152.
RC TISSUE=Intestine;
RX MEDLINE=80092152; PubMed=520589; DOI=10.1016/0014-5793(79)80587-6;
RA Carlquist M., Mutt V., Joernvall H.;
RT "Isolation and characterization of bovine vasoactive intestinal
RT peptide (VIP).";
RL FEBS Lett. 108:457-460(1979).
RN [4]
RP FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
RP stimulates myocardial contractility, increases glycogenolysis and
RP relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; AF503910; AAM28152.1; -; mRNA.
DR HSSP; P18509; 1GEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 25
FT PROPEP 26 79
FT PEPTIDE 81 107 Intestinal peptide PHI-27.
FT PROPEP 111 122
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide
FT group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide
FT group).
SQ SEQUENCE 170 AA; 19165 MW; 9C6A6049AF7BFF81 CRC64;

  Query Match      95.1%; Score 135; DB 1; Length 170;
  Best Local Similarity 96.4%; Pred. No. 5e-12;
  Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
  ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

RESULT 12
VIP_HUMAN
ID VIP_HUMAN STANDARD; PRT; 170 AA.
AC P01282; Q96QK3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHV-42;
DE Intestinal peptide PHM-27 (Peptide histidine methioninamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=VIP;
OS Homo sapiens (Human)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

```

OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominiidae;
OC Homo.
OX NCBI_TaxID=9606;
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=83271523; PubMed=571696;
RA Itoh N., Obata K.-I., Yanaihara N., Okamoto H.;
RT "Human preprovasoactive intestinal polypeptide contains a novel PHI-
RT 27-like peptide, PHN-27.";
RL Nature 304:547-549(1983).
RN
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=88267775; PubMed=2839091;
RA Yamagami T., Ohsawa K., Nishizawa M., Inoue C., Gotoh E.,
RA Yanaihara N., Yamamoto H., Okamoto H.;
RT "Complete nucleotide sequence of human vasoactive intestinal
RT peptide/PHN-27 gene and its inducible promoter.";
RL Ann. N. Y. Acad. Sci. 527:87-102(1988).
RN
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=86004065; PubMed=3899557;
RA Tsukada T., Horovitch S.J., Montminy M.R., Mandel G., Goodman R.H.;
RT "Structure of the human vasoactive intestinal polypeptide gene.";
RL DNA 4:293-300(1985).
RN
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=87092456; PubMed=3025882;
RA Linder S., Barkhem T., Norberg A., Persson H., Schalling M.,
RA Hoekfelt T., Magnusson G.;
RT "Structure and expression of the gene encoding the vasoactive
RT intestinal peptide precursor.";
RL Proc. Natl. Acad. Sci. U.S.A. 84:605-609(1987).
RN
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=86016352; PubMed=2995945; DOI=10.1016/0196-9781(85)90016-6;
RA Delamater J.F., Buell G.N., Kawahima E., Polak J.M., Bloom S.R.;
RT "Vasoactive intestinal peptide: expression of the prohormone in
RT bacterial cells.";
RL Peptides 6:95-102(1985).
RN
RN NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.D., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Ustin T.B., Toshiyuki S., Carninci P., Frange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahy J., Hellon E., Kerteman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smalhus D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN
RN NUCLEOTIDE SEQUENCE OF 8-170.
RX MEDLINE=86313155; PubMed=3748844; DOI=10.1016/0196-9781(86)90156-7;
RA Gozes I., Bodener M., Shani Y., Fridkin M.;
RT "Structure and expression of the vasoactive intestinal peptide (VIP)
RT gene in a human tumor.";
RL Peptides 7:11-6(1986).
RN
RN NUCLEOTIDE SEQUENCE OF 50-170.
RX TISSUE=Pancreatic carcinoma;
RX MEDLINE=84066682; PubMed=6139527; DOI=10.1016/S0140-6736(83)91215-1;
RA Bloom S.R., Delamater J.F., Kawahima E., Christofides N.D.,
RA Buell G., Polak J.M.;
RT "Diarrhea in vipoma patients associated with cosecretion of a second
RT active peptide (peptide histidine isoleucine) explained by single
RT coding gene.";
RL Lancet 2:1163-1165(1983).
RN
RN NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=87140054; PubMed=2434617;
RA Gozes I., Giladi E., Shani Y.;
RT "Vasoactive intestinal peptide gene: putative mechanism of information
RT storage at the RNA level.";
RL J. Neurochem. 47:1136-1141(1987).
RN
RN PROTEIN SEQUENCE OF 81-122.
RX MEDLINE=88007645; PubMed=3654650;
RA Yiangou Y., di Marzo V., Spokes R.A., Panico M., Morris H.R.,
RA Bloom S.R.;
RT "Isolation, characterization, and pharmacological actions of peptide
RT histidine valine 42, a novel prepro-vasoactive intestinal peptide-
RT derived peptide.";
RL J. Biol. Chem. 262:14010-14013(1987).
RN
RN PROTEIN SEQUENCE OF 127-152.
RX TISSUE=Pheochromocytoma;
RX MEDLINE=92287083; PubMed=1318039;
RA Kitamura K., Kangawa K., Kawamoto M., Ichiki Y., Matsuo H., Eto T.;
RT "Isolation and characterization of peptides which act on rat
RT platelets, from a pheochromocytoma.";
RL Biochem. Biophys. Res. Commun. 185:134-141(1992).
RN
RN STRUCTURE BY NMR OF VIP.
RX MEDLINE=91323243; PubMed=1863695;
RA Theriault Y., Boulanger Y., St Pierre S.;
RT "Structural determination of the vasoactive intestinal peptide by two-
RT dimensional H-NMR spectroscopy.";
RL Biopolymers 31:459-464(1991).
CC
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHM and PHV also cause vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; L00157; AAA61289.1; -; Genomic_DNA.
CC EMBL; L00154; AAA61289.1; JOINED; Genomic_DNA.
CC EMBL; L00155; AAA61289.1; JOINED; Genomic_DNA.
CC EMBL; L00156; AAA61289.1; JOINED; Genomic_DNA.
CC EMBL; M33027; AAA69515.1; -; Genomic_DNA.
CC EMBL; M1553; AAA61284.1; -; Genomic_DNA.
CC EMBL; M1549; AAA61284.1; JOINED; Genomic_DNA.
CC EMBL; M1550; AAA61284.1; JOINED; Genomic_DNA.
CC EMBL; M1551; AAA61284.1; JOINED; Genomic_DNA.
CC EMBL; M1552; AAA61284.1; JOINED; Genomic_DNA.
CC EMBL; M14623; AAA61288.1; -; Genomic_DNA.
CC EMBL; M14619; AAA61288.1; JOINED; Genomic_DNA.
CC EMBL; M14620; AAA61288.1; JOINED; Genomic_DNA.
CC EMBL; M14621; AAA61288.1; JOINED; Genomic_DNA.
CC EMBL; M14622; AAA61288.1; JOINED; Genomic_DNA.
CC EMBL; M36606; AAA61286.1; -; Genomic_DNA.
CC EMBL; M36607; AAA61286.1; JOINED; Genomic_DNA.
CC EMBL; M36608; AAA61286.1; JOINED; Genomic_DNA.
CC EMBL; M36609; AAA61286.1; JOINED; Genomic_DNA.
CC EMBL; BC009794; AAH09794.1; -; mRNA.
CC EMBL; M36634; AAA61287.1; -; mRNA.

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DR EMBL; M54930; AAA63268.1; -; mRNA.
DR EMBL; M32162; AAA61285.1; -; Genomic_DNA.
DR EMBL; M31645; AAA61285.1; JOINED; Genomic_DNA.
DR PIR; A23296; VRHU.
DR HSSP; P18509; IGEA.
DR Ensembl; ENSG00000146469; Homo sapiens.
DR HGNC; HGNC:12693; VIP.
DR H-InVDB; HIX0006306; -.
DR MIM; 192320; -.
DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
DR GO; GO:0007589; P:fluid secretion; TAS.
DR GO; GO:0007186; P:G-protein coupled receptor protein signalin...; TAS.
DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 20
FT PROPEP 21 79
FT PEPTIDE 81 122
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT MOD_RES 152 152
FT CONFLICT 96 97
FT CONFLICT 113 113
FT CONFLICT 116 116
FT CONFLICT 136 136
SQ SEQUENCE 170 AA; 19169 MW; 933EC0177F89508FD CRC64;

Query Match 95.1%; Score 135; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNTYRLRKQMAVKYKLSILN 28
Db 125 HSDAVFTDNTYRLRKQMAVKYKLSILN 152

RESULT 13
VIP_MOUSE STANDARD; PRT; 170 AA.
AC P32648;
DT 01-OCT-1993 (Rel. 27, Created)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=Vip;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
RT polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 1-36.
RC STRAIN=C57BL/6; TISSUE=Spleen;
RX MEDLINE=95201289; PubMed=7894056;
RA Sena M., Bravo D.T., Agoston D., Waschek J.A.;

"High conservation of upstream regulatory sequences on the human and
mouse vasoactive intestinal peptide (VIP) genes.";
-!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
stimulates myocardial contractility, increases glycogenolysis and
relaxes the smooth muscle of trachea, stomach and gall bladder.
-!- FUNCTION: PHM also causes vasodilation.
-!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: Belongs to the glucagon family.

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the European Bioinformatics Institute. There are no restrictions on its
use as long as its content is in no way modified and this statement is not
removed.

EMBL; X74297; CAA52350.1; -; Genomic_DNA.
PIR; A60037; A60037.
HSSP; P18509; IGEA.
Ensembl; ENSMUSG00000019772; Mus musculus.
MGI; MGI:98933; Vip.
GO; GO:0005615; C:extracellular space; TAS.
InterPro; IPR000532; Glucagon.
Pfam; PF00123; Hormone 2; 2.
PRINTS; PR00275; GLUCAGON.
PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues; Glucagon family;
KW Glycoprotein; Hormone; Signal.
FT SIGNAL 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT MOD_RES 152 152
FT CARBOHYD 133 133
FT SEQUENCE 170 AA; 19049 MW; 0164C831F8F5C73D CRC64;

Query Match 95.1%; Score 135; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNTYRLRKQMAVKYKLSILN 28
Db 125 HSDAVFTDNTYRLRKQMAVKYKLSILN 152

RESULT 14
VIP_RAT STANDARD; PRT; 170 AA.
AC P01283;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=Vip;
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=90244869; PubMed=2159586; DOI=10.1016/0169-328X(90)90036-D;
RA Giladi E., Shani Y., Gozes I.;
RT "The complete structure of the rat VIP gene.";
```

```
RL Brain Res. Mol. Brain Res. 7:261-267(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 9-170.
RC TISSUE=Brain cortex;
RA MEDLINE=85154612; PubMed=3838518; DOI=10.1016/0014-5793(85)80953-4;
RX Nishizawa M., Hayakawa Y., Yanaiharu N., Okamoto H.;
RT "Nucleotide sequence divergence and functional constraint in VIP
  precursor mRNA evolution between human and rat.";
RL FEBS Lett. 183:55-59(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RA MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RX Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
  polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [4]
RP PROTEIN SEQUENCE OF 134-152.
RA MEDLINE=88243784; PubMed=3379062;
RX Goetzl E.J., Sreedharan S.P., Turck C.W.;
RT "Structurally distinctive vasoactive intestinal peptides from rat
  basophilic leukemia cells.";
RL J. Biol. Chem. 263:9083-9086(1988).
CC -|- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -|- FUNCTION: PHI also causes vasodilation.
CC -|- SUBCELLULAR LOCATION: Secreted.
CC -|- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR EMBL; X02341; CAA26200.1; -; mRNA.
DR PIR; A60053; VRET.
DR HSP; P18509; IGEA.
DR Ensembl; ENSRNOG00000018808; Rattus norvegicus.
DR RGD; 621647; Vip.
DR GO; GO:0042311; P:vasodilation; NAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;
KW Signal.
FT SIGNAL 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT -----
FT Intestinal peptide PHV-42 (By
FT similarity).
FT PEPTIDE 81 107
FT Intestinal peptide PHR-27.
FT PEPTIDE 125 152
FT Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107
FT Isoleucine amide (G-108 provides amide
FT group).
FT MOD_RES 152 152
FT Asparagine amide (G-153 provides amide
FT group).
FT CARBOHYD 68 68
FT N-linked (GlcNAc. . .) (Potential).
FT CARBOHYD 133 133
FT N-linked (GlcNAc. . .) (Potential).
SQ SEQUENCE 170 AA; 19079 MW; 202AE82EBBD190B CRC64;
Query Match 95.1%; Score 135; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. NO. 5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||
Db 125 HSDAVFTDNTYRLRKQMAVKKYLNSILN 152
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RESULT 15
QSTCY9 HUMAN
ID QSTCY9 HUMAN PRELIMINARY; PRT; 170 AA.
AC QSTCY9;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-001;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CA121764.1; -; Genomic_DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 170 AA; 19168 MW; 93EC0177F89508FD CRC64;
Query Match 95.1%; Score 135; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. NO. 5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||
Db 125 HSDAVFTDNTYRLRKQMAVKKYLNSILN 152
Search completed: January 25, 2006, 15:18:39
Job time : 76 secs
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-6
Perfect score: 148
Sequence: 1 HSDAVFTWYTRLRKQMAVKKYLNSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_21:.*
1: Geneseqpl980s:.*
2: Geneseqpl990s:.*
3: Geneseq2000s:.*
4: Geneseq2001s:.*
5: Geneseq2002s:.*
6: Geneseq2003as:.*
7: Geneseq2003bs:.*
8: Geneseq2004s:.*
9: Geneseq2005s:.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Query Match	Score	Length	DB ID	Description
1	135	91.2	28	5	ABG94138 Human vas
2	135	91.2	28	5	ABG94141 Human vas
3	134	90.5	28	5	ABG94139 Human vas
4	133	89.9	28	1	AAp10172 VIP. 3/20
5	133	89.9	28	1	AAp71039 Sequence
6	133	89.9	28	2	AAR34943 Porcine V
7	133	89.9	28	2	AAR40272 Native VI
8	133	89.9	28	2	AAR53111 Bronchodi
9	133	89.9	28	2	AAR53109 Bronchodi
10	133	89.9	28	2	AAR53110 Bronchodi
11	133	89.9	28	2	AAR87092 Vasoactiv
12	133	89.9	28	2	AAR83785 VIP. 2/19
13	133	89.9	28	2	AAR97810 Vasoactiv
14	133	89.9	28	2	AAR93023 Human glu
15	133	89.9	28	2	AAw65188 Vasoactiv
16	133	89.9	28	2	AAw06120 Human VIP
17	133	89.9	28	2	AAw06119 Mouse VIP
18	133	89.9	28	2	AAw06114 Rabbit VI
19	133	89.9	28	2	AAw06113 Macaque V
20	133	89.9	28	2	AAw06121 Pig VIP p
21	133	89.9	28	2	AAw06122 Goat VIP p
22	133	89.9	28	2	AAw06115 Dog VIP p
23	133	89.9	28	2	AAw06112 Sheep VIP
24	133	89.9	28	2	AAw37791 Vasoactiv

25	133	89.9	28	2	AAW71677	Aaw71677 Vasoactiv
26	133	89.9	28	2	AAy30769	Aay30769 Vasoactiv
27	133	89.9	28	2	AAy44196	Aay44196 Human vas
28	133	89.9	28	3	AAy94560	Aay94560 Vasoactiv
29	133	89.9	28	4	AAB85707	Aab85707 Peptide h
30	133	89.9	28	4	AAB85710	Aab85710 Peptide h
31	133	89.9	28	4	AAB91279	Aab91279 Vasoactiv
32	133	89.9	28	4	AAB91278	Aab91278 Vasoactiv
33	133	89.9	28	4	AAE12028	AAe12028 Porcine v
34	133	89.9	28	4	AAE12028	AAe12028 Porcine v
35	133	89.9	28	4	AAE12028	AAe12028 Porcine v
36	133	89.9	28	4	AAE12028	AAe12028 Porcine v
37	133	89.9	28	4	AAU09653	Aau09653 Porcine i
38	133	89.9	28	4	AAU09653	Aau09653 Porcine i
39	133	89.9	28	4	AAU09653	Aau09653 Porcine i
40	133	89.9	28	4	AAU09653	Aau09653 Porcine i
41	133	89.9	28	5	AAE19603	AAe19603 Human vas
42	133	89.9	28	5	AAE19603	AAe19603 Human vas
43	133	89.9	28	5	AAU85989	Aau85989 Mammalian
44	133	89.9	28	5	AAU85989	Aau85989 Modified
45	133	89.9	28	5	ABG94140	Abg94140 Tumour sp
						Abg94140 Human vas

ALIGNMENTS

RESULT 1
ID ABG94138
XX ABG94138 standard; peptide; 28 AA.
AC ABG94138;
XX
DT 27-NOV-2002 (first entry)
XX
DE Human vasoactive intestinal polypeptide (VIP) analogue #186.
XX
KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.
XX
OS Unidentified.
XX
PN US2002099003-A1.
XX
PD 25-JUL-2002.
XX
PF 13-AUG-2001; 2001US-00929818.
XX
PR 28-OCT-1997; 97US-00959057.
PR 28-OCT-1997; 97US-00959064.
PR 27-OCT-1998; 98US-00181316.
PR 04-FEB-2000; 2000US-00498522.
XX
PA (WILSON) WILSON L F.
PA (PLAC) PLACE V A.
XX
PI Wilson LF, Place VA;
XX
DR WPI; 2002-697729/75.
XX
PT Treating sexual dysfunction in females comprises administering vasoactive
PT intestinal polypeptide or against to vagina and/or vulvar region.
XX
PS Claim 19; Page; 19pp; English.
XX
CC The invention relates to a method for treating sexual dysfunction in
CC females comprising administering a formulation comprising a vasoactive
CC agent comprising a vasoactive intestinal polypeptide and/or agonist to
CC the vagina and/or vulvar region. The method is used for preventing

CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952
 XX
 SQ Sequence 28 AA;

Query Match 91.2%; Score 135; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 4.4e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
 ||||| ||||| ||||| ||||| |||||
 Db 1 HSDAVFTTNYTRLRKQMAVKKYLNSILN 28

RESULT 2
 ABG94141
 ID ABG94141 standard; peptide; 28 AA.
 XX
 AC ABG94141;
 DT 27-NOV-2002 (first entry)
 XX
 DE Human vasoactive intestinal polypeptide (VIP) analogue #189.
 XX
 KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
 KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
 KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
 KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
 KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
 KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
 KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.
 XX
 OS Unidentified.
 XX
 PN US2002099003-A1.
 XX
 PD 25-JUL-2002.
 XX
 PF 13-AUG-2001; 2001US-00929818.
 XX
 PR 28-OCT-1997; 97US-00959057.
 PR 28-OCT-1997; 97US-00959064.
 PR 27-OCT-1998; 98US-00181316.
 PR 04-FEB-2000; 2000US-00498522.
 XX
 PA (WILS/) WILSON L F.
 PA (PLAC/) PLACE V A.
 XX
 PI Wilson LF, Place VA;
 XX
 DR WPI; 2002-697729/75.
 XX
 PT Treating sexual dysfunction in females comprises administering vasoactive
 PT intestinal polypeptide or against to vagina and/or vulvar region.
 XX
 PS Claim 19; Page; 19pp; English.
 XX
 CC The invention relates to a method for treating sexual dysfunction in
 CC females comprising administering a formulation comprising a vasoactive
 CC agent comprising a vasoactive intestinal polypeptide and/or agonist to

CC the vagina and/or vulvar region. The method is used for preventing
 CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952
 XX
 SQ Sequence 28 AA;

Query Match 91.2%; Score 135; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 4.4e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
 ||||| ||||| ||||| ||||| |||||
 Db 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

RESULT 3
 ABG94139
 ID ABG94139 standard; peptide; 28 AA.
 XX
 AC ABG94139;
 DT 27-NOV-2002 (first entry)
 XX
 DE Human vasoactive intestinal polypeptide (VIP) analogue #187.
 XX
 KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
 KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
 KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
 KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
 KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
 KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
 KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.
 XX
 OS Unidentified.
 XX
 PN US2002099003-A1.
 XX
 PD 25-JUL-2002.
 XX
 PF 13-AUG-2001; 2001US-00929818.
 XX
 PR 28-OCT-1997; 97US-00959057.
 PR 28-OCT-1997; 97US-00959064.
 PR 27-OCT-1998; 98US-00181316.
 PR 04-FEB-2000; 2000US-00498522.
 XX
 PA (WILS/) WILSON L F.
 PA (PLAC/) PLACE V A.
 XX
 PI Wilson LF, Place VA;
 XX
 DR WPI; 2002-697729/75.
 XX
 PT Treating sexual dysfunction in females comprises administering vasoactive
 PT intestinal polypeptide or against to vagina and/or vulvar region.
 XX
 PS Claim 19; Page; 19pp; English.
 XX
 CC The invention relates to a method for treating sexual dysfunction in
 CC females comprising administering a formulation comprising a vasoactive

CC agent comprising a vasoactive intestinal polypeptide and/or agonist to
 CC the vagina and/or vulvar region. The method is used for preventing
 CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952
 XX
 XX SQ Sequence 28 AA;

Query Match 90.5%; Score 134; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 5.8e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
 Db 1 HSDAVFTSNYTRLRKQMAVKKYLNSILN 28

RESULT 4

AAP10172
 ID AAP10172 standard; peptide; 28 AA.

AC AAP10172;

DT 25-MAR-2003 (revised)

DT 21-DEC-1992 (first entry)

XX VIP.

XX Vasoactive intestinal polypeptide;
 KW allergic asthma. chemical mediator isolation-inhibiting action.

XX Homo sapiens.

XX JP56128721-A.

XX 08-OCT-1981.

XX 12-MAR-1980; 80JP-00030308.

XX 12-MAR-1980; 80JP-00030308.

XX (EISA) EISAI CO LTD.

XX WPI; 1981-86052D/47.

XX Antiallergic agent comprises peptide - contg. 28 amino acid units, is
 PT active against e.g. bronchial asthma and hay fever.

XX Claim 1; Page 1; 3pp; Japanese.

XX The sequence given can be used as the active component in an antiallergic
 CC agent. Vasoactive intestinal polypeptide (VIP) has chemical mediator
 CC isolation-inhibiting action and is effective for therapy and prevention
 CC of various allergic diseases, such as allergic rhinitis, bronchial
 CC asthma, allergic asthma, hay fever, urticaria, eczema, atopic dermatitis
 CC etc. Since it also has specific bronchial smooth muscle relaxant action,
 CC it is esp. useful for treating and preventing bronchial and allergic
 CC asthma. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
 CC 2003 to correct PA field.)

XX Sequence 28 AA;

Query Match 89.9%; Score 133; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 7.8e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
 Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 5

AAP71039
 ID AAP71039 standard; peptide; 28 AA.

XX AAP71039;

XX 03-OCT-2002 (revised)

DT 05-APR-1991 (first entry)

XX Sequence of active ingredient in hair growth promoting compsn.

DE Vasoactive intestinal tract polypeptide; digestive tract polypeptide;
 XX hair growth promoter.

XX Synthetic.

XX EP225639-A.

XX 16-JUN-1987.

XX 10-DEC-1986; 86EP-00117190.

XX 10-DEC-1985; 85JP-00276099.

XX (MEIJ) MEIJI SBIKA KAISHA.

XX Yanaihara N, Watanabe S, Kasai M, Sato T, Kikkoji T;

XX WPI; 1987-164873/24.

XX Hair growth promoting compsns. - contg. vasoactive intestinal polypeptide
 PT and carrier.

XX Claim 1; Page 8; 10pp; English.

XX When applied to the skin, the peptide causes a local increase in blood
 CC flow and promotes hair growth. It is the natural peptide known as
 CC vasoactive intestinal polypeptide which has been isolated from the
 CC digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)

XX Sequence 28 AA;

Query Match 89.9%; Score 133; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 7.8e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28

Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 6

AAR34943
 ID AAR34943 standard; peptide; 28 AA.

XX AAR34943;

XX 25-MAR-2003 (revised)

DT 28-JUL-1993 (first entry)

XX Porcine VIP.

XX Vasoactive intestinal peptide; asthma; bronchodilation activity;

KW bronchiotracheal constrictive disorders.
 XX
 OS Sus scrofa.
 XX
 PN EP536741-A2.
 XX
 PD 14-APR-1993.
 XX
 PF 08-OCT-1992; 92EP-00117185.
 XX
 PR 11-OCT-1991; 91US-00773747.
 XX
 PA (HOFF) HOFFMANN LA ROCHE & CO AG F.
 XX
 PI Bolin DR, Odonnell M;
 XX
 DR WPI; 1993-118996/15.
 XX
 XX New cyclic vasoactive intestinal peptide (VIP) analogues - are useful for
 PT the treatment of bronchotracheal constrictive disorders e.g. asthma.
 XX
 PS Disclosure; Page 65; 141pp; English.
 XX
 CC The sequence is that of porcine vasoactive intestinal peptide (VIP) as
 CC claimed in EP-325044. The peptide sequence was used to design cyclic
 CC analogues of VIP which have enhanced bronchodilation activity without any
 CC observable side effects such as cardiovascular side effects. The
 CC bronchodilation produced by the analogues can be sustained for more than
 CC two hours. The analogues may be used for the treatment of bronchotracheal
 CC constrictive disorders, e.g. asthma. See also RR3944-5016. (Updated on 25
 CC -MAR-2003 to correct PN field.)
 XX
 XX Sequence 28 AA;
 SQ
 Query Match 89.9%; Score 133; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 7.8e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 RESULT 7
 AAR40272
 ID AAR40272 standard; protein; 28 AA.
 AC AAR40272;
 XX 25-MAR-2003 (revised)
 DT 09-FEB-1994 (first entry)
 XX
 DE Native VIP.
 XX Vasoactive intestinal peptide; VIP; bronchodilator; cardiovascular;
 KW side effect; bronchoconstrictive disorder; asthma.
 KW
 OS Sus scrofa.
 XX
 XX Key Location/Qualifiers
 FH Modified-site 28 /note= "C-terminal is amidated"
 FT
 PN US5234907-A.
 XX
 PD 10-AUG-1993.
 XX
 PF 24-APR-1991; 91US-00690300.
 XX
 PR 30-JUN-1989; 89US-00374503.
 XX
 PA (HOFF) HOFFMANN LA ROCHE INC.
 XX
 XX
 PI Bolin DR;
 XX
 DR WPI; 1993-264645/33.
 XX
 XX New vasoactive intestinal peptide analogues - are potent bronchodilators
 PT without cardiovascular side effects, used for treating, e.g. asthma.
 XX
 PS Disclosure; Page 25-26; 66pp; English.
 XX
 CC VIP (AAR40272) was used in the prodn. of analogues (AAR40273-78: generic
 CC formulae; AAR40279-364: examples). The VIP analogues are potent
 CC bronchodilators and have no cardiovascular side effects. They are used
 CC for the treatment of bronchoconstrictive disorders, e.g. asthma. (Updated
 CC on 25-MAR-2003 to correct PF field.)
 XX
 XX Sequence 28 AA;
 SQ
 Query Match 89.9%; Score 133; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 7.8e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 RESULT 8
 AAR53111
 ID AAR53111 standard; peptide; 28 AA.
 XX
 AC AAR53111;
 XX
 DT 20-DEC-1994 (first entry)
 XX
 DE Bronchodilator peptide #21.
 XX
 KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
 KW selectively; toxicity; mammal; bronchodilator.
 XX
 OS Synthetic.
 XX
 XX Key Location/Qualifiers
 FH Misc-difference 10 /note= "D-form residue"
 FT Misc-difference 22 /note= "D-form residue"
 FT Modified-site 28 /note= "Amidated C-terminal"
 FT
 PN JP06092991-A.
 XX
 PD 05-APR-1994.
 XX
 PF 28-FEB-1991; 91JP-00034335.
 XX
 PR 28-FEB-1991; 91JP-00034335.
 XX
 PA (DAIL) DAICEL CHEM IND LTD.
 PA (MEIJ) MEIJI SEIKA KAISHA.
 XX
 DR WPI; 1994-147946/18.
 XX
 XX Active peptide(s), having smooth muscle relaxing activity - useful as
 PT bronchodilators.
 PT
 PS Disclosure; Page 5; 29pp; Japanese.
 XX
 CC The sequences given in AAR53091-111 are synthetic peptides based on
 CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
 CC the smooth muscle selectively and are only low toxic-non- toxic to
 CC mammals. These peptides may be used as bronchodilators. They are prepared
 CC by solid phase synthesis using a resin having an amino functional group
 CC capable of bonding to the amino acid at the carboxy terminal through a

CC carboxyl group and fixing the peptide chain during the synthesis
XX
SQ Sequence 28 AA;

Query Match 89.9%; Score 133; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.8e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKYKLSILN 28
||||| ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTLRKQMAVKYKLSILN 28

RESULT 9

AAR53109
ID AAR53109 standard; peptide; 28 AA.

AC AAR53109;

DT 20-DEC-1994 (first entry)

DE Bronchodilator peptide #19.

KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
selectively; toxicity; mammal; bronchodilator.

OS Synthetic.

FH Key Location/Qualifiers

FT Misc-difference 10 /note= "D-form residue"
FT Modified-site 28 /note= "Amidated C-terminal"

PN JP06092991-A.

PD 05-APR-1994.

PF 28-FEB-1991; 91JP-00034335.

PR 28-FEB-1991; 91JP-00034335.

XX (DAIL) DAICEL CHEM IND LTD.

FA (MEIJ) MEIJI SEIKA KAISHA.

XX WPI; 1994-147946/18.

XX Active peptide(s), having smooth muscle relaxing activity - useful as
bronchodilators.

PS Disclosure; Page 5; 29pp; Japanese.

CC The sequences given in AAR53091-111 are synthetic peptides based on
CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
CC the smooth muscle selectively and are only low toxic-non- toxic to
CC mammals. These peptides may be used as bronchodilators. They are prepared
CC by solid phase synthesis using a resin having an amino functional group
CC capable of bonding to the amino acid at the carboxy terminal through a
CC carboxyl group and fixing the peptide chain during the synthesis

XX Sequence 28 AA;

Query Match 89.9%; Score 133; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.8e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKYKLSILN 28
||||| ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTLRKQMAVKYKLSILN 28

RESULT 10

AAR53110

ID AAR53110 standard; peptide; 28 AA.

AC AAR53110;

DT 20-DEC-1994 (first entry)

DE Bronchodilator peptide #20.

KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
selectively; toxicity; mammal; bronchodilator.

OS Synthetic.

FH Key Location/Qualifiers

FT Misc-difference 22 /note= "D-form residue"
FT Modified-site 28 /note= "Amidated C-terminal"

PN JP06092991-A.

PD 05-APR-1994.

PF 28-FEB-1991; 91JP-00034335.

PR 28-FEB-1991; 91JP-00034335.

XX (DAIL) DAICEL CHEM IND LTD.

FA (MEIJ) MEIJI SEIKA KAISHA.

XX WPI; 1994-147946/18.

XX Active peptide(s), having smooth muscle relaxing activity - useful as
bronchodilators.

PS Disclosure; Page 5; 29pp; Japanese.

CC The sequences given in AAR53091-111 are synthetic peptides based on
CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
CC the smooth muscle selectively and are only low toxic-non- toxic to
CC mammals. These peptides may be used as bronchodilators. They are prepared
CC by solid phase synthesis using a resin having an amino functional group
CC capable of bonding to the amino acid at the carboxy terminal through a
CC carboxyl group and fixing the peptide chain during the synthesis

XX Sequence 28 AA;

Query Match 89.9%; Score 133; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.8e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKYKLSILN 28
||||| ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTLRKQMAVKYKLSILN 28

RESULT 11

AAR87092

ID AAR87092 standard; peptide; 28 AA.

AC AAR87092;

DT 06-JUN-1996 (first entry)

DE Vasoactive intestinal peptide, forms part of gene transfer complex.

KW Porcine; VIP; cell surface receptor; ligand; gene transfer; transfection;
gene therapy; vaccine.

OS Sus scrofa.

XX Key Location/Qualifiers

FT Modified-site 28

```

FT XX /note= "amidated"
XX FR2719316-A1.
XX PN
XX PD 03-NOV-1995.
XX PF 28-APR-1994; 94FR-00005174.
XX PI 28-APR-1994; 94FR-00005174.
XX PR
XX PA (IDMI-) IDM IMMUNO-DESIGNED MOLECULES.
XX PI Midoux P, Erbacher P, Roche-Degremont A, Monsigny M;
XX WPI; 1995-375617/49.
XX DR
XX XX
XX XX New nucleic acid complexes with cationic polymers - useful for genetic
XX PT transformation of cells.
XX XX
XX PS Claim 11; Page 43; 59pp; French.
XX CC In novel complexes of negatively-charged nucleic acids and positively-
XX CC charged polymers, the polymers comprise monomer subunits bearing NH3+
XX CC groups, at least 10% of which are replaced by uncharged amino groups
XX CC bearing a substit. that has at least one -OH group and is not recognised
XX CC by cell membrane receptors; the side-chain groups of the polymer (i.e.
XX CC the NH3+ and/or OH groups) may be substd. by a group that is recognised
XX CC by a cell membrane receptor, provided that at least 30% of the NH3+
XX CC groups remain free. The complexes are useful for transfecting particular
XX CC nucleic acid sequences into particular cell types, depending on the
XX CC identity of the cell membrane receptor ligands involved, e.g. for gene
XX CC therapy or prepn. of vaccines. Preferred ligands are oligoglycoside
XX CC antigens recognised by lectins, natural metabolites (such as biotin,
XX CC tetrahydrofolate, folic acid or carnitine) or peptides (pref. vasoactive
XX CC intestinal peptide, atrial natriuretic peptide, lipocortin, bradykinin,
XX CC peptide hormones such as alpha-MSH, chemotactic factors and integrin
XX CC ligands)
XX SQ Sequence 28 AA;
XX Query Match 89.9%; Score 133; DB 2; Length 28;
XX Best Local Similarity 96.4%; Pred. No. 7.8e-10;
XX Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
XX
RESULT 12
AAR83785
ID AAR83785 standard; peptide; 28 AA.
XX
XX AAR83785;
XX 27-FEB-1996 (first entry)
XX DE
XX DE VIP.
XX KW VIP; vasoactive intestinal polypeptide; peptide hormone; glucagon;
XX KW secretin; nervous system; digestive system; smooth muscle; relaxant;
XX KW bronchial asthma; impotence; therapy.
XX OS
XX OS Sus scrofa.
XX PH Key Location/Qualifiers
XX FT Misc-difference 29
XX FT /note= "amidated"
XX XX
XX PN EP63406-A1.
XX PD 19-JUL-1995.
XX FT

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PP 19-DEC-1994; 94EP-00120126.
XX
XX PR 20-DEC-1993; 93JP-00319815.
XX
XX PA (SANW ) SANWA KAGAKU KENKYUSHO CO.
XX
XX PI Noda H, Yamakawa H, Yoshina S, Ishida T, Tomiya N;
XX
XX DR WPI; 1995-247502/33.
XX
XX XX
XX PT New modified form of vasoactive intestinal polypeptide - with C-terminal
XX PT substd. amide residue, has greater in vivo stability and persistence,
XX PT useful for treating asthma and impotence.
XX
XX PS Disclosure; Page 3; 16pp; English.
XX
XX CC This sequence represents vasoactive intestinal polypeptide (VIP). VIP is
XX CC a peptide hormone that shows smooth muscle relaxant activity. The
XX CC structure of VIP is similar to that of the other peptides in the glucagon
XX CC -secretin family, to which it belongs. VIP is present in the nervous
XX CC system and the digestive system tracts. It is also found in the lungs of
XX CC normal patients (however, it is not found in the lungs of people
XX CC suffering from bronchial asthma). The sequences shown in AAR83784 and
XX CC AAR83786 are analogues of this sequence. These analogues are found to be
XX CC resistant to protease digestion. The analogues can be used to treat
XX CC asthma (by inhalation) and impotence (percutaneously). Compared to
XX CC natural VIP, the analogue sequences have better in vivo stability. The
XX CC analogue sequences are also more persistent than natural VIP and have
XX CC excellent affinity for biological membranes
XX SQ Sequence 28 AA;
XX Query Match 89.9%; Score 133; DB 2; Length 28;
XX Best Local Similarity 96.4%; Pred. No. 7.8e-10;
XX Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
XX
RESULT 13
AAR97810
ID AAR97810 standard; peptide; 28 AA.
XX
XX AC AAR97810;
XX DT 22-AUG-1996 (first entry)
XX
XX DE Vasoactive Intestinal Peptide VIP(1-28), for dermal ulcer treatment.
XX KW Vasoactive intestinal peptide; VIP; vasodilation; hyperkinemic; skin;
XX KW burn; decubitis; diabetes; ulcer; bedsores; pressure sore.
XX OS Synthetic.
XX PH Key Location/Qualifiers
XX FT Modified-site 28
XX FT /note= "amidated"
XX
XX PN JP08040926-A.
XX PD 13-FEB-1996.
XX
XX PF 03-AUG-1994; 94JP-00182457.
XX
XX PR 03-AUG-1994; 94JP-00182457.
XX
XX PA (YAKU-) YAKURIGAKU CHUO KENKYUSHO KK.
XX
XX DR WPI; 1996-157021/16.
XX
XX FT Remedy for dermal ulcer - comprises vasoactive intestinal polypeptide as

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```

PT active component.
PS Claim 1; Page 2; 4pp; Japanese.
XX
XX Vasoactive intestinal peptide and related compounds are known to have
CC strong vasodilatory activity. They have now been found to be effective in
CC the treatment of skin ulcers, esp. decubitus ulcers but also burn ulcers,
CC diabetic ulcers, etc. VIP(1-28) is the preferred peptide for use in the
CC novel skin ulcer remedy
XX
XX Sequence 28 AA;
SQ
    Query Match      89.9%; Score 133; DB 2; Length 28;
    Best Local Similarity 96.4%; Pred. No. 7.8e-10;
    Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
    Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
       ||||| ||||| ||||| ||||| |||||
    Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
       ||||| ||||| ||||| ||||| |||||

RESULT 14
AAR93023
ID AAR93023 standard; protein; 28 AA.
XX
XX AAR93023;
AC
XX
XX 09-AUG-1996 (first entry)
DT
XX
XX Human glucagon degrading enzyme - VIP substrate.
DE
XX
XX Glucagon degrading enzyme; catalyst; cleavage; selectin; human; primer;
KW vasoactive intestinal peptide; VIP; pancreatic carcinoma cell line; PCR;
KW amplification; polymerase chain reaction; probe; expression vector;
KW eukaryote; SV40 promoter; COS-7.
XX
XX Synthetic.
OS
XX
XX Key Location/Qualifiers
FH Cleavage-site 17. .18
FT Modified-site 28
FT Modified-site 28 /note= "contains C-terminal amide group"
FT
XX
XX JP08023972-A.
FN
XX
XX 30-JAN-1996.
PD
XX
XX 19-JUL-1994; 94JP-00187936.
PF
XX
XX 19-JUL-1994; 94JP-00187936.
PR
XX
XX (SUNR ) SUNTORY LTD.
PA
XX
XX WPI; 1996-133414/14.
DR
XX
XX New glucagon decomposing enzyme, and DNA encoding it - for specifically
PT cleaving glucagon and vasoactive intestinal peptide, in the prevention
PT and treatment of diseases caused by excess glucagon and VIP.
XX
XX Claim 1; Page 2; 18pp; Japanese.
PS
XX
XX A novel gene encoding a glucagon degrading enzyme (GDE; AAT11575) was
CC isolated from a human pancreatic carcinoma cell line HPC-Yo cDNA library.
CC The enzyme has a mol. wt. 83 kD, a pH optimum of 6.8 and catalyzes the
CC cleavage of glucagon, vasoactive intestinal peptide and selectin
CC (AAR93022-4). The gene encoding the enzyme was isolated by screening the
CC library with an anti-GDE peptide antibody, amplifying the inserts with
CC the primers AAT18903-4 and probing the fragments with the probe AAT18905.
CC This screening resulted in the full length clone designated lambda GD84-
CC 2. The coding region of the clone was subsequently PCR amplified by the
CC primers AAT11576-7 and inserted into the eukaryotic expression vector
CC pKDCR under control of the SV40 promoter for production of the protein in
CC COS-7 cells. The protein is useful in preventing and treating diseases

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CC characterised by an excess of glucagon or vasoactive intestinal peptide
XX
XX Sequence 28 AA;
SQ
    Query Match      89.9%; Score 133; DB 2; Length 28;
    Best Local Similarity 96.4%; Pred. No. 7.8e-10;
    Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
    Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
       ||||| ||||| ||||| ||||| |||||
    Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
       ||||| ||||| ||||| ||||| |||||

RESULT 15
AAW65188
ID AAW65188 standard; peptide; 28 AA.
XX
XX AAW65188;
AC
XX
XX 02-OCT-1998 (first entry)
DT
XX
XX Vasoactive intestinal peptide (VIP) analogue.
DE
XX
XX Bradykinin; N-benzylglycine; agonist; receptor study; antagonist;
KW achiral; analgesic; luteinising hormone-releasing hormone; LHRH;
KW vasopressin; vasoactive intestinal peptide; VIP.
XX
XX Synthetic.
OS
XX
XX Key Location/Qualifiers
FH Modified-site 28
FT Modified-site 28 /note= "C-terminal amide"
FT
XX
XX US5527882-A.
FN
XX
XX 18-JUN-1996.
PD
XX
XX 07-NOV-1994; 94US-00335202.
PF
XX
XX 07-JUL-1989; 89US-00376839.
PR
XX
XX 16-SEP-1992; 92US-00945664.
XX
XX (REGC ) UNIV CALIFORNIA.
PA
XX
XX Young JD, Mitchell AR;
XX
XX WPI; 1996-299898/30.
DR
XX
XX New bradykinin analogues contg. N-benzyl-glycine - useful as bradykinin
PT agonists or antagonists, useful e.g. as analgesics.
PT
XX
XX Disclosure; Col 7-8; 15pp; English.
PS
XX
XX The invention relates to the obtaining of a potent agonist or antagonist
CC peptide by the replacement of selected amino acids with synthetic achiral
CC amino acids. The present sequence represents a vasoactive intestinal
CC peptide (VIP) analogue, where at least one of Phe6 and Met17 is intended
CC to be replaced by N-benzylglycine, N-cyclohexylmethylglycine or the ring
CC substituted derivatives thereof
XX
XX Sequence 28 AA;
SQ
    Query Match      89.9%; Score 133; DB 2; Length 28;
    Best Local Similarity 96.4%; Pred. No. 7.8e-10;
    Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
    Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
       ||||| ||||| ||||| ||||| |||||
    Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
       ||||| ||||| ||||| ||||| |||||

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Job time : 77.875 secs

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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:08 ; Search time 21.875 Seconds
(without alignments)
105.825 Million cell updates/sec

Title: US-10-626-719-6

Perfect score: 148
Sequence: 1 HSDAVFTWNYTLRLKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	148	100.0	28	US-09-528-200-6	Sequence 6, Appli
2	138	93.2	28	US-09-528-200-2	Sequence 2, Appli
3	135	91.2	28	US-09-528-200-4	Sequence 4, Appli
4	134	90.5	28	US-09-528-200-3	Sequence 3, Appli
5	134	90.5	28	US-09-528-200-5	Sequence 5, Appli
6	133	89.9	28	US-07-690-300B-1	Sequence 1, Appli
7	133	89.9	28	US-07-676-987A-1	Sequence 1, Appli
8	133	89.9	28	US-07-868-906-1	Sequence 1, Appli
9	133	89.9	28	US-08-201-092-1	Sequence 1, Appli
10	133	89.9	28	US-07-924-054-11	Sequence 11, Appli
11	133	89.9	28	US-08-243-082-1	Sequence 1, Appli
12	133	89.9	28	US-08-361-443-1	Sequence 1, Appli
13	133	89.9	28	US-08-288-681A-1	Sequence 1, Appli
14	133	89.9	28	US-07-776-272-26	Sequence 26, Appli
15	133	89.9	28	US-08-308-729-1	Sequence 1, Appli
16	133	89.9	28	US-08-062-472B-40	Sequence 40, Appli
17	133	89.9	28	US-08-171-701A-1	Sequence 1, Appli
18	133	89.9	28	US-08-741-678-1	Sequence 1, Appli
19	133	89.9	28	US-08-519-180-2	Sequence 2, Appli
20	133	89.9	28	US-08-414-424-1	Sequence 1, Appli
21	133	89.9	28	US-08-413-708B-1	Sequence 1, Appli
22	133	89.9	28	US-08-818-253-37	Sequence 37, Appli
23	133	89.9	28	US-08-897-624-1	Sequence 1, Appli
24	133	89.9	28	US-08-930-845-1	Sequence 1, Appli
25	133	89.9	28	US-08-952-568-3	Sequence 3, Appli
26	133	89.9	28	US-08-952-568-4	Sequence 4, Appli
27	133	89.9	28	US-08-952-568-5	Sequence 5, Appli

28	133	89.9	28	2	US-08-952-568-6	Sequence 6, Appli
29	133	89.9	28	2	US-08-952-568-10	Sequence 10, Appli
30	133	89.9	28	2	US-08-952-568-11	Sequence 11, Appli
31	133	89.9	28	2	US-08-952-568-12	Sequence 12, Appli
32	133	89.9	28	2	US-08-952-568-13	Sequence 13, Appli
33	133	89.9	28	2	US-09-192-048-21	Sequence 21, Appli
34	133	89.9	28	2	US-08-893-749-2	Sequence 2, Appli
35	133	89.9	28	2	US-08-818-252-37	Sequence 37, Appli
36	133	89.9	28	2	US-09-260-846-16	Sequence 16, Appli
37	133	89.9	28	2	US-08-842-322-31	Sequence 31, Appli
38	133	89.9	28	2	US-09-333-842-1	Sequence 1, Appli
39	133	89.9	28	2	US-09-446-352B-1	Sequence 1, Appli
40	133	89.9	28	2	US-09-316-919-53	Sequence 53, Appli
41	133	89.9	28	2	US-09-630-335-1	Sequence 1, Appli
42	133	89.9	28	2	US-09-629-632A-1	Sequence 1, Appli
43	133	89.9	28	2	US-09-528-200-196	Sequence 196, Appli
44	133	89.9	28	2	US-09-316-920A-53	Sequence 53, Appli
45	133	89.9	28	2	US-09-646-046-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1
US-09-528-200-6
; Sequence 6, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 6
; LENGTH: 28
; TYPE: PPT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-6

Query Match 100.0%; Score 148; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 2.7e-14;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRLKQMAVKYLSILN 28
| | | | | | | | | | | | | | | | | | | | | | | | | |
Db 1 HSDAVFTWNYTLRLKQMAVKYLSILN 28

RESULT 2
US-09-528-200-2
; Sequence 2, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN

; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGNER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17 17 713.9
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-528-200-2

Query Match 93.2%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.1e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
|||||:|||||
Db 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
|||||:|||||

RESULT 3
US-09-528-200-4
; Sequence 4, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGNER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-528-200-4

Query Match 91.2%; Score 135; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.9e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
|||||:|||||
Db 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
|||||:|||||

RESULT 4
US-09-528-200-3
; Sequence 3, Application US/09528200

; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGNER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-528-200-3

Query Match 90.5%; Score 134; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
|||||:|||||
Db 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
|||||:|||||

RESULT 5
US-09-528-200-5
; Sequence 5, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGNER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 5
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-528-200-5

Query Match 90.5%; Score 134; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28

Db 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
|||||

RESULT 6
US-07-690-300B-1
; Sequence 1, Application US/07690300B
; Patent No. 5234907
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110

; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07690300B
; FILING DATE: 19910424
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/374,503
; FILING DATE: 30-JUN-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8480
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa

US-07-690-300B-1

Query Match 89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
|||||

Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||

RESULT 7
US-07-676-987A-1
; Sequence 1, Application US/07676987A
; Patent No. 5273963
; GENERAL INFORMATION:
; APPLICANT: TERRY W. MOODY
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
; TITLE OF INVENTION: CELL AND NONSMALL CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROTHWELL, FIGG, ERNST & KURZ
; STREET: 555 THIRTEENTH ST. N.W.
; CITY: WASHINGTON

; STATE: D. C.
; COUNTRY: U.S.
; ZIP: 20004
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07676,987A
; FILING DATE: 19910329
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: REPPER, GEORGE R.
; REGISTRATION NUMBER: 31,414
; REFERENCE/DOCKET NUMBER: 1783-101
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 783-6040
; TELEFAX: (202) 783-6031
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide

US-07-676-987A-1

Query Match 89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
|||||

Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||

RESULT 8
US-07-868-906-1
; Sequence 1, Application US/07868906
; Patent No. 5376637
; GENERAL INFORMATION:
; APPLICANT: Sawai, Kiichi
; APPLICANT: Kuroono, Masayasu
; APPLICANT: Mitani, Takahiko
; APPLICANT: Sato, Makoto
; APPLICANT: Takahashi, Haruo
; APPLICANT: Ohwaki, Hiroyuki
; TITLE OF INVENTION: PHARMACEUTICAL PREPARATION CONTAINING
; TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE OR ITS ANALOGUE
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Nikaido, Marmelstein, Murray & Oram
; STREET: 1725 K St. N.W. Suite 1000
; CITY: Washington
; STATE: D.C.
; COUNTRY: USA
; ZIP: 20006
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07868,906
; FILING DATE: 19920416
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 3-90671
; FILING DATE: 22-APR-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Oram Jr., George E.
; REGISTRATION NUMBER: 27,931
; REFERENCE/DOCKET NUMBER: 920238N

TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 659-2930
TELEFAX: (202) 887-0357
TELEX: 440142
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-07-868-906-1

Query Match 89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 9
US-08-201-092-1
Sequence 1, Application US/08201092
Patent No. 5428015
GENERAL INFORMATION:
APPLICANT: KURONO, Masayasu
APPLICANT: MITANI, Takahiko
APPLICANT: TAKAHASHI, Haruo
APPLICANT: SAWAI, Kiichi
TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Armstrong, Nikaide, Marmelstein, Kubovcik, &
ADDRESSEE: Murray
STREET: 1725 K St. N.W. Suite 1000
CITY: Washington
STATE: D. C.
COUNTRY: U. S. A.
ZIP: 20006
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/201,092
FILING DATE: 24-FEB-1994
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 2-165739
FILING DATE: 26-JUN-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 2-408425
FILING DATE: 27-DEC-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/704,143
FILING DATE: 22-MAY-1991
ATTORNEY/AGENT INFORMATION:
NAME: Oram Jr., George E.
REGISTRATION NUMBER: 27,931
REFERENCE/DOCKET NUMBER: N910809
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)-659-2930
TELEFAX: (202)-887-0357
TELEX: 440142
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide

FRAGMENT TYPE: C-terminal
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
TISSUE TYPE: Small intestine, proximal
US-08-201-092-1

Query Match 89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 10
US-07-924-054-11
Sequence 11, Application US/07924054
Patent No. 5486472
GENERAL INFORMATION:
APPLICANT: SUZUKI, No. 5486472uhiro
APPLICANT: KITADA, Chieko
APPLICANT: TSUDA, Masao
TITLE OF INVENTION: ANTIBODY TO PACAP AND USE THEREOF
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: DAVID G. CONLIN; DIKE, BRONSTEIN, ROBERTS &
ADDRESSEE: CUSHMAN
STREET: 130 Water Street
CITY: Boston
STATE: Massachusetts
COUNTRY: US
ZIP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/924,054
FILING DATE: 19920903
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: RESNICK, David S.
REGISTRATION NUMBER: 34235
REFERENCE/DOCKET NUMBER: 40805
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 523-3400
TELEFAX: (617) 523-6440
TELEX: 200291 STRE UR
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: protein
US-07-924-054-11

Query Match 89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 11
US-08-243-082-1
Sequence 1, Application US/08243082
Patent No. 5506120
GENERAL INFORMATION:
APPLICANT: YAMAMOTO, Hiroaki

;; APPLICANT: YAMASHITA, Kunihiro
;; TITLE OF INVENTION: METHOD OF PRODUCING PEPTIDES OR
;; NUMBER OF SEQUENCES: 26
;; CORRESPONDENCE ADDRESS:
;; ADDRESSEE: Spencer, Frank & Schneider
;; STREET: 1111 Nineteenth Street, N.W.
;; CITY: Washington
;; STATE: D.C.
;; COUNTRY: U.S.A.
;; ZIP: 20036
;; MEDIUM TYPE: Floppy disk
;; COMPUTER: IBM PC compatible
;; OPERATING SYSTEM: PC-DOS/MS-DOS
;; SOFTWARE: PatentIn Release #1.0, Version #1.25
;; CURRENT APPLICATION DATA:
;; APPLICATION NUMBER: US/08/243,082
;; FILING DATE:
;; CLASSIFICATION: 435
;; PRIOR APPLICATION DATA:
;; APPLICATION NUMBER: US/07/853,754
;; FILING DATE: 05-JUN-1992
;; ATTORNEY/AGENT INFORMATION:
;; NAME: Schneller, John W.
;; REGISTRATION NUMBER: 26,031
;; REFERENCE/DOCKET NUMBER: KUMAT 0010
;; TELECOMMUNICATION INFORMATION:
;; TELEPHONE: (202) 828-8000
;; TELEFAX: (202) 828-8038
;; TELEX: SPENCER 64267
;; INFORMATION FOR SEQ ID NO: 1:
;; SEQUENCE CHARACTERISTICS:
;; LENGTH: 28 amino acids
;; TYPE: amino acid
;; TOPOLOGY: linear
;; MOLECULE TYPE: peptide
;; HYPOTHETICAL: NO
;; ANTI-SENSE: NO
;; FRAGMENT TYPE: N-terminal
US-08-243-082-1

Query Match 89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 12
US-08-361-443-1
; Sequence 1, Application US/08361443
; Patent No. 5521157
; GENERAL INFORMATION:
; APPLICANT: No. 5521157a, Hitoshi
; APPLICANT: Yamakawa, Hidehumi
; APPLICANT: Yoshina, Shigeaki
; APPLICANT: Ishida, Tsutomu
; APPLICANT: Tomiya, No. 5521157oru
; TITLE OF INVENTION: MODIFIED POLYPEPTIDE COMPOUND AND USE OF
; TITLE OF INVENTION: THE SAME
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: SUGHRUE, MION, ZINN, MACPEAK & SEAS
; STREET: 2100 Pennsylvania Ave.
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk

;; COMPUTER: IBM PC compatible
;; OPERATING SYSTEM: PC-DOS/MS-DOS
;; SOFTWARE: PatentIn Release #1.0, Version #1.25
;; CURRENT APPLICATION DATA:
;; APPLICATION NUMBER: US/08/361,443
;; FILING DATE:
;; CLASSIFICATION: 530
;; PRIOR APPLICATION DATA:
;; APPLICATION NUMBER: JP Hei. 5-319815
;; FILING DATE: 20-DEC-1993
;; INFORMATION FOR SEQ ID NO: 1:
;; SEQUENCE CHARACTERISTICS:
;; LENGTH: 28 amino acids
;; TYPE: amino acid
;; STRANDEDNESS: single
;; TOPOLOGY: linear
;; MOLECULE TYPE: peptide
US-08-361-443-1

Query Match 89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 13
US-08-288-681A-1
; Sequence 1, Application US/08288681A
; Patent No. 5595897
; GENERAL INFORMATION:
; APPLICANT: MIDOUX, PATRICK; ERBACHER, ANNIE-CLAUDE;
; APPLICANT: PATRICK; ROCHE-DEGREMONT, ANNIE-CLAUDE;
; APPLICANT: MONSIGNY, MICHEL
; TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC
; TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
; TITLE OF INVENTION: PREPARATION AND THEIR USAGE FOR TRANSFECTION
; NUMBER OF SEQUENCES: 7
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BIERMAN & MUSERLIAN
; STREET: 600 THIRD AVENUE
; CITY: NEW YORK
; STATE: NEW YORK
; COUNTRY: USA
; ZIP: 10016
; COMPUTER READABLE FORM:
; MEDIUM TYPE: FLOPPY DISK
; COMPUTER: IBM PC COMPATIBLE
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: ASCII
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/288,681A
; FILING DATE: 10-AUG-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR/94/05174
; FILING DATE: 28-APR-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: CHARLES A. MUSERLIAN
; REGISTRATION NUMBER: 19,683
; REFERENCE/DOCKET NUMBER: 410.005
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 661-8000
; TELEFAX: (212) 661-8002
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28
; TYPE: Amino Acid
; STRANDEDNESS: Unknown
; TOPOLOGY: Unknown

GenCore version 5.1.6
Copyright (c) 1993 - 2006 Compugen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:48 ; Search time 53.625 Seconds
(without alignments)
218.167 Million cell updates/sec

Title: US-10-626-719-6

Perfect score: 148

Sequence: 1 HSDAVFTTNYTRLRKQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

- Published Applications_AA_Main:
- 1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep.*
 - 2: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep.*
 - 3: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep.*
 - 4: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep.*
 - 5: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep.*
 - 6: /cgn2_6/ptodata/1/pubpaa/US11_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	135	91.2	28	US-09-929-818-187	Sequence 187, App
2	135	91.2	28	US-09-929-818-190	Sequence 190, App
3	134	90.5	28	US-09-929-818-188	Sequence 188, App
4	133	89.9	28	US-09-929-818-1	Sequence 1, Appli
5	133	89.9	28	US-09-929-818-189	Sequence 189, App
6	133	89.9	28	US-09-929-818-189	Sequence 189, App
7	133	89.9	28	US-09-929-818-189	Sequence 189, App
8	133	89.9	28	US-09-929-818-189	Sequence 189, App
9	133	89.9	28	US-09-929-818-189	Sequence 189, App
10	133	89.9	28	US-09-929-818-189	Sequence 189, App
11	133	89.9	28	US-09-929-818-189	Sequence 189, App
12	133	89.9	28	US-09-929-818-189	Sequence 189, App
13	133	89.9	28	US-09-929-818-189	Sequence 189, App
14	133	89.9	28	US-09-929-818-189	Sequence 189, App
15	133	89.9	28	US-09-929-818-189	Sequence 189, App
16	133	89.9	28	US-09-929-818-189	Sequence 189, App
17	133	89.9	28	US-09-929-818-189	Sequence 189, App
18	133	89.9	28	US-09-929-818-189	Sequence 189, App
19	133	89.9	28	US-09-929-818-189	Sequence 189, App
20	133	89.9	28	US-09-929-818-189	Sequence 189, App
21	133	89.9	28	US-09-929-818-189	Sequence 189, App
22	133	89.9	28	US-09-929-818-189	Sequence 189, App
23	133	89.9	28	US-09-929-818-189	Sequence 189, App
24	133	89.9	28	US-09-929-818-189	Sequence 189, App
25	133	89.9	28	US-09-929-818-189	Sequence 189, App
26	133	89.9	28	US-09-929-818-189	Sequence 189, App
27	133	89.9	28	US-09-929-818-189	Sequence 189, App

28	133	89.9	28	5	US-10-930-548-3	Sequence 3, Appli
29	133	89.9	28	5	US-10-770-712-56	Sequence 56, Appli
30	133	89.9	28	5	US-10-799-897A-1	Sequence 1, Appli
31	133	89.9	28	6	US-11-066-697-454	Sequence 454, App
32	133	89.9	28	6	US-11-066-697-455	Sequence 455, App
33	133	89.9	29	4	US-10-131-543-11	Sequence 11, Appli
34	133	89.9	29	4	US-10-131-546-11	Sequence 11, Appli
35	133	89.9	29	4	US-10-131-546-11	Sequence 11, Appli
36	133	89.9	29	4	US-10-415-024-11	Sequence 11, Appli
37	133	89.9	29	6	US-11-088-596-11	Sequence 11, Appli
38	133	89.9	29	6	US-11-086-966-11	Sequence 11, Appli
39	133	89.9	30	3	US-09-929-818-203	Sequence 203, App
40	133	89.9	30	3	US-09-929-818-204	Sequence 204, App
41	133	89.9	30	3	US-09-929-818-205	Sequence 205, App
42	133	89.9	31	4	US-10-131-543-9	Sequence 9, Appli
43	133	89.9	31	4	US-10-131-543-10	Sequence 10, Appli
44	133	89.9	31	4	US-10-131-543-16	Sequence 16, Appli
45	133	89.9	31	4	US-10-131-546-9	Sequence 9, Appli

ALIGNMENTS

RESULT 1
US-09-929-818-187
; Sequence 187, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 187
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-187

Query Match	91.2%	Score 135;	DB 3;	Length 28;
Beat Local Similarity	96.4%	Pred. No. 2.8e-12;		
Matches	27;	Conservative	0;	Mismatches 1;
		Indels	0;	Gaps 0;
Qy	1	HSDAVFTTNYTRLRKQMAVKYLSILN	28	
Db	1	HSDAVFTTNYTRLRKQMAVKYLSILN	28	

RESULT 2
US-09-929-818-190
; Sequence 190, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE

;; TITLE OF INVENTION: AND AGONISTS THEREOF
;; FILE REFERENCE: 9050-0013.24
;; CURRENT APPLICATION NUMBER: US/09/929,818
;; CURRENT FILING DATE: 2001-08-13
;; PRIOR APPLICATION NUMBER: 09/498,522
;; PRIOR FILING DATE: 2000-02-04
;; PRIOR APPLICATION NUMBER: 09/181,316
;; PRIOR FILING DATE: 1998-10-27
;; PRIOR APPLICATION NUMBER: 08/959,064
;; PRIOR FILING DATE: 1997-10-28
;; PRIOR APPLICATION NUMBER: 08/959,057
;; PRIOR FILING DATE: 1997-10-28
;; NUMBER OF SEQ ID NOS: 207
;; SOFTWARE: PatentIn Ver. 2.1
;; SEQ ID NO 190
;; LENGTH: 28
;; TYPE: PRT
;; ORGANISM: Artificial Sequence
;; FEATURE:
;; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
;; OTHER INFORMATION: analog
US-09-929-818-190

Query Match 91.2%; Score 135; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
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RESULT 3
US-09-929-818-188
;; Sequence 188, Application US/09929818
;; Patent No. US20020099003A1
;; GENERAL INFORMATION:
;; APPLICANT: WILSON, LELAND F.
;; APPLICANT: PLACE, VIRGIL A.
;; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
;; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
;; TITLE OF INVENTION: AND AGONISTS THEREOF
;; FILE REFERENCE: 9050-0013.24
;; CURRENT APPLICATION NUMBER: US/09/929,818
;; CURRENT FILING DATE: 2001-08-13
;; PRIOR APPLICATION NUMBER: 09/498,522
;; PRIOR FILING DATE: 2000-02-04
;; PRIOR APPLICATION NUMBER: 09/181,316
;; PRIOR FILING DATE: 1997-10-28
;; PRIOR APPLICATION NUMBER: 08/959,064
;; PRIOR FILING DATE: 1997-10-28
;; NUMBER OF SEQ ID NOS: 207
;; SOFTWARE: PatentIn Ver. 2.1
;; SEQ ID NO 188
;; LENGTH: 28
;; TYPE: PRT
;; ORGANISM: Artificial Sequence
;; FEATURE:
;; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
;; OTHER INFORMATION: analog
US-09-929-818-188

Query Match 90.5%; Score 134; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.9e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTSNYTRLRKQMAVKKYLNSILN 28
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RESULT 4
US-09-929-818-1
;; Sequence 1, Application US/09929818
;; Patent No. US20020099003A1
;; GENERAL INFORMATION:
;; APPLICANT: WILSON, LELAND F.
;; APPLICANT: PLACE, VIRGIL A.
;; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
;; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
;; TITLE OF INVENTION: AND AGONISTS THEREOF
;; FILE REFERENCE: 9050-0013.24
;; CURRENT APPLICATION NUMBER: US/09/929,818
;; CURRENT FILING DATE: 2001-08-13
;; PRIOR APPLICATION NUMBER: 09/498,522
;; PRIOR FILING DATE: 2000-02-04
;; PRIOR APPLICATION NUMBER: 09/181,316
;; PRIOR FILING DATE: 1998-10-27
;; PRIOR APPLICATION NUMBER: 08/959,064
;; PRIOR FILING DATE: 1997-10-28
;; PRIOR APPLICATION NUMBER: 08/959,057
;; PRIOR FILING DATE: 1997-10-28
;; NUMBER OF SEQ ID NOS: 207
;; SOFTWARE: PatentIn Ver. 2.1
;; SEQ ID NO 1
;; LENGTH: 28
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-09-929-818-1

Query Match 89.9%; Score 133; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
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RESULT 5
US-09-929-818-189
;; Sequence 189, Application US/09929818
;; Patent No. US20020099003A1
;; GENERAL INFORMATION:
;; APPLICANT: WILSON, LELAND F.
;; APPLICANT: PLACE, VIRGIL A.
;; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
;; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
;; TITLE OF INVENTION: AND AGONISTS THEREOF
;; FILE REFERENCE: 9050-0013.24
;; CURRENT APPLICATION NUMBER: US/09/929,818
;; CURRENT FILING DATE: 2001-08-13
;; PRIOR APPLICATION NUMBER: 09/498,522
;; PRIOR FILING DATE: 2000-02-04
;; PRIOR APPLICATION NUMBER: 09/181,316
;; PRIOR FILING DATE: 1998-10-27
;; PRIOR APPLICATION NUMBER: 08/959,064
;; PRIOR FILING DATE: 1997-10-28
;; PRIOR APPLICATION NUMBER: 08/959,057
;; PRIOR FILING DATE: 1997-10-28
;; NUMBER OF SEQ ID NOS: 207
;; SOFTWARE: PatentIn Ver. 2.1
;; SEQ ID NO 189
;; LENGTH: 28
;; TYPE: PRT
;; ORGANISM: Artificial Sequence
;; FEATURE:
;; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
;; OTHER INFORMATION: analog
US-09-929-818-189

Query Match 89.9%; Score 133; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

; PRIOR APPLICATION NUMBER: 07/779,039
; PRIOR FILING DATE: 1991-10-18
; PRIOR APPLICATION NUMBER: 07/502,438
; PRIOR FILING DATE: 1990-03-30
; PRIOR APPLICATION NUMBER: 07/397,169
; PRIOR FILING DATE: 1989-08-21
; PRIOR APPLICATION NUMBER: 07/376,555
; PRIOR FILING DATE: 1989-07-07
; PRIOR APPLICATION NUMBER: 07/317,941
; PRIOR FILING DATE: 1989-03-02
; PRIOR APPLICATION NUMBER: 07/282,328
; PRIOR FILING DATE: 1988-12-09
; PRIOR APPLICATION NUMBER: 07/257,998
; PRIOR FILING DATE: 1988-10-14
; PRIOR APPLICATION NUMBER: 07/248,771
; PRIOR FILING DATE: 1988-09-23
; Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-004-530A-17

Query Match 89.9%; Score 133; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 11
US-10-114-716A-3
; Sequence 3, Application US/10114716A
; Publication No. US20030078203A1
; GENERAL INFORMATION:
; APPLICANT: Sudhir Paul
; APPLICANT: Yasuhiro Nishiyama
; TITLE OF INVENTION: Covalently Reactive Transition State
; TITLE OF INVENTION: Analogs and Methods of Use Thereof
; FILE REFERENCE: UTH001HB
; CURRENT APPLICATION NUMBER: US/10/114,716A
; CURRENT FILING DATE: 2002-04-01
; PRIOR APPLICATION NUMBER: 09/862,849
; PRIOR FILING DATE: 2001-05-22
; PRIOR APPLICATION NUMBER: 09/046,373
; PRIOR FILING DATE: 1998-03-23
; PRIOR APPLICATION NUMBER: 60/280,624
; PRIOR FILING DATE: 2001-03-31
; NUMBER OF SEQ ID NOS: 57
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Vasoactive intestinal peptide
US-10-114-716A-3

Query Match 89.9%; Score 133; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 12
US-10-211-994-1
; Sequence 1, Application US/10211994
; Publication No. US20030082201A1

; GENERAL INFORMATION:
; APPLICANT: Rao, M.R.S.
; APPLICANT: Sengupta, Paromita
; APPLICANT: Prasad, Sudhanand
; APPLICANT: Burman, Anand C.
; APPLICANT: Mukherjee, Rama
; APPLICANT: Thomas, Becky
; TITLE OF INVENTION: MULTIVALENT SYNTHETIC VACCINE FOR CANCER
; FILE REFERENCE: U014152-1
; CURRENT APPLICATION NUMBER: US/10/211,994
; CURRENT FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: 60/309,975
; PRIOR FILING DATE: 2001-08-03
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-211-994-1

Query Match 89.9%; Score 133; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 13
US-10-197-954-145
; Sequence 145, Application US/10197954
; Publication No. US20030119021A1
; GENERAL INFORMATION:
; APPLICANT: K*ster, Hubert
; APPLICANT: Siddiqi, Suhail
; APPLICANT: Little, Daniel
; TITLE OF INVENTION: Capture Compounds, Collections Thereof
; TITLE OF INVENTION: And Methods For Analyzing The Proteome And Complex
; TITLE OF INVENTION: Compositions
; FILE REFERENCE: 24743-2305
; CURRENT APPLICATION NUMBER: US/10/197,954
; CURRENT FILING DATE: 2002-07-16
; PRIOR APPLICATION NUMBER: 60/306,019
; PRIOR FILING DATE: 2001-07-16
; PRIOR APPLICATION NUMBER: 60/314,123
; PRIOR FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 60/363,433
; PRIOR FILING DATE: 2002-03-11
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 145
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-197-954-145

Query Match 89.9%; Score 133; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 14
US-10-100-256B-1
; Sequence 1, Application US/10100256B
; Publication No. US20030152511A1
; GENERAL INFORMATION:
; APPLICANT: Thakur, Madhukar

; TITLE OF INVENTION: RADIOLABELED VASOACTIVE INTESTINAL
; FILE OF INVENTION: PEPTIDE ANALOGS FOR IMAGING AND THERAPY
; FILE REFERENCE: 8321-104-D11
; CURRENT APPLICATION NUMBER: US/10/100,256B
; CURRENT FILING DATE: 2002-03-15
; PRIOR APPLICATION NUMBER: US 09/333,842
; PRIOR FILING DATE: 1999-06-15
; PRIOR APPLICATION NUMBER: US 60/089,364
; PRIOR FILING DATE: 1998-06-15
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-100-256B-1

Query Match 89.9%; Score 133; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

RESULT 15
US-10-254-569A-1
; Sequence 1, Application US/10254569A
; Publication No. US20030158110A1
; GENERAL INFORMATION:
; APPLICANT: BURMAN C, ANAND
; APPLICANT: PRASAD, SUDHANAND
; APPLICANT: MUKHERJEE, RAMA
; APPLICANT: SINGH T, ANU
; APPLICANT: MATHUR, ARCHNA
; APPLICANT: GUPTA, NEENA
; TITLE OF INVENTION: VASOACTIVE INTESTINAL PEPTIDES ANALOGS
; FILE REFERENCE: 014071-1
; CURRENT APPLICATION NUMBER: US/10/254,569A
; CURRENT FILING DATE: 2002-12-05
; PRIOR APPLICATION NUMBER: 136/DEL/2000
; PRIOR FILING DATE: 2000-02-18
; PRIOR APPLICATION NUMBER: 09/630,335
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-254-569A-1

Query Match 89.9%; Score 133; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:31:04
Job time : 53.625 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 15:08:34 ; Search time 3.5 Seconds
(without alignments)
86.633 Million cell updates/sec

Title: US-10-626-719-6

Perfect score: 148

Sequence: 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28

Scoring table: BLOSUM62

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Searched: 75621 seqs, 10829074 residues

Total number of hits satisfying chosen parameters: 75621

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA New:*

- 1: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep.*
- 2: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep.*
- 3: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep.*
- 4: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep.*
- 5: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep.*
- 6: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep.*
- 7: /cgn2_6/ptodata/2/pubpaa/US11_NEW_PUB.pep.*
- 8: /cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	133	89.9	28	7	US-11-175-690-352 Sequence 352, App
2	133	89.9	28	7	US-11-175-690-353 Sequence 353, App
3	133	89.9	637	7	US-11-175-690-265 Sequence 265, App
4	133	89.9	637	7	US-11-175-690-266 Sequence 266, App
5	97	65.5	636	7	US-11-175-690-240 Sequence 240, App
6	96	64.9	27	7	US-11-175-690-326 Sequence 326, App
7	96	64.9	27	7	US-11-175-690-327 Sequence 327, App
8	96	64.9	38	7	US-11-175-690-328 Sequence 328, App
9	96	64.9	38	7	US-11-175-690-329 Sequence 329, App
10	96	64.9	636	7	US-11-175-690-239 Sequence 239, App
11	96	64.9	647	7	US-11-175-690-241 Sequence 241, App
12	96	64.9	647	7	US-11-175-690-242 Sequence 242, App
13	72	48.6	636	7	US-11-175-690-278 Sequence 278, App
14	71	48.0	27	7	US-11-175-690-364 Sequence 364, App
15	71	48.0	27	7	US-11-175-690-365 Sequence 365, App
16	71	48.0	636	7	US-11-175-690-277 Sequence 277, App
17	62	41.9	30	7	US-11-112-277-30 Sequence 30, Appli
18	58	39.2	30	7	US-11-112-277-2 Sequence 2, Appli
19	54	36.5	30	7	US-11-112-277-29 Sequence 29, Appl
20	54	36.5	49	6	US-10-997-081A-26 Sequence 26, Appl
21	54	36.5	49	6	US-10-997-081A-27 Sequence 27, Appl
22	54	36.5	49	6	US-10-997-081A-28 Sequence 28, Appl
23	54	36.5	49	6	US-10-997-081A-29 Sequence 29, Appl
24	54	36.5	49	6	US-10-997-081A-30 Sequence 30, Appl
25	54	36.5	49	6	US-10-997-081A-31 Sequence 31, Appl

26	54	36.5	49	6	US-10-997-081A-32	Sequence 32, Appl
27	54	36.5	49	6	US-10-997-081A-35	Sequence 35, Appl
28	54	36.5	95	6	US-10-997-081A-25	Sequence 25, Appl
29	54	36.5	97	6	US-10-997-081A-11	Sequence 11, Appl
30	54	36.5	97	6	US-10-997-081A-18	Sequence 18, Appl
31	54	36.5	97	6	US-10-997-081A-19	Sequence 19, Appl
32	54	36.5	97	6	US-10-997-081A-20	Sequence 20, Appl
33	54	36.5	97	6	US-10-997-081A-21	Sequence 21, Appl
34	54	36.5	97	6	US-10-997-081A-22	Sequence 22, Appl
35	54	36.5	97	6	US-10-997-081A-23	Sequence 23, Appl
36	54	36.5	97	6	US-10-997-081A-40	Sequence 40, Appl
37	54	36.5	97	6	US-10-997-081A-41	Sequence 41, Appl
38	54	36.5	105	6	US-10-997-081A-10	Sequence 10, Appl
39	53	35.8	30	7	US-11-112-277-31	Sequence 31, Appl
40	48	32.4	567	7	US-11-120-422-7	Sequence 7, Appl
41	48	32.4	568	7	US-11-226-480-10	Sequence 10, Appl
42	48	32.4	636	7	US-11-175-690-268	Sequence 268, App
43	47	31.8	27	7	US-11-175-690-354	Sequence 354, App
44	47	31.8	27	7	US-11-175-690-355	Sequence 355, App
45	47	31.8	636	7	US-11-175-690-267	Sequence 267, App

ALIGNMENTS

RESULT 1

US-11-175-690-352
; Sequence 352, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:

; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 352
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-352

Query Match 89.9%; Score 133; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | | | | | | | | | |
Db 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

RESULT 2

US-11-175-690-353
; Sequence 353, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:

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; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 353
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-353

Query Match      89.9%; Score 133; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db      1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-11-175-690-265
; Sequence 265, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match      89.9%; Score 133; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 4.1e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db      1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

US-11-175-690-266
; Sequence 266, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 266
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-266

Query Match      89.9%; Score 133; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 4.1e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db      25 HSDAVFTDNYTRLRKQMAVKKYLNSILN 52

RESULT 5
US-11-175-690-240
; Sequence 240, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 240
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-240

Query Match      89.9%; Score 133; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 4.1e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db      25 HSDAVFTDNYTRLRKQMAVKKYLNSILN 52
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; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 240
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-240

Query Match      65.5%; Score 97; DB 7; Length 636;
Best Local Similarity 64.3%; Pred. No. 1.5e-07;
Matches 18; Conservative 6; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYTRLRKQMAVKKYLNSIL 28
Db 25 HSDGIFTDSYRKRQMAVKKYLAAVL 52

RESULT 6
US-11-175-690-326
; Sequence 326, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 326
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-326

Query Match      64.9%; Score 96; DB 7; Length 27;
Best Local Similarity 66.7%; Pred. No. 6.8e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYTRLRKQMAVKKYLNSIL 27
Db 1 HSDGIFTDSYRKRQMAVKKYLAAVL 27

RESULT 7
US-11-175-690-327
; Sequence 327, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
```

```
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 327
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-327

Query Match      64.9%; Score 96; DB 7; Length 27;
Best Local Similarity 66.7%; Pred. No. 6.8e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYTRLRKQMAVKKYLNSIL 27
Db 1 HSDGIFTDSYRKRQMAVKKYLAAVL 27

RESULT 8
US-11-175-690-328
; Sequence 328, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 328
; LENGTH: 38
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-328

Query Match      64.9%; Score 96; DB 7; Length 38;
Best Local Similarity 66.7%; Pred. No. 9.8e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYTRLRKQMAVKKYLNSIL 27
```

[illegible]

Qy	1 HSDAVFTTNNYTRLRKQMAVKKYLNSILN 28 : : : : : : : :
Db	25 HADGVFTSDFSKLLGQLSAKKYLESIMD 52 : : : : : : : :

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RESULT 15
US-11-175-690-365
; Sequence 365, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
;
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patent Ver. 2.0
; SEQ ID NO 365
; LENGTH: 27

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; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-365

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Query Match 48.0%; Score 71; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 5e-05;
Matches 12; Conservative 9; Mismatches 6; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMVKYLSIL 27
 :|:||||::| |::| ||| ::
Dd 1 HDGVFTSDFSKLLGQLSAKKYLESLM 27

Search completed: January 25, 2006, 15:31:43
Job time : 4.5 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2006 Compugen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2006, 14:55:03 ; Search time 13.25 Seconds
(without alignments)
203.326 Million cell updates/sec

Title: US-10-626-719-6
Perfect score: 148
Sequence: 1 HSDAVFTWNYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues
Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR 80:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	133	89.9	28	B60071	vasoactive intesti
2	133	89.9	28	A60304	vasoactive intesti
3	133	89.9	55	VRBO	vasoactive intesti
4	133	89.9	55	VRBB	vasoactive intesti
5	133	89.9	55	VRSH	vasoactive intesti
6	133	89.9	58	VRPG	vasoactive intesti
7	133	89.9	145	A60038	vasoactive intesti
8	133	89.9	170	VRHU	vasoactive intesti
9	133	89.9	170	VRRT	vasoactive intesti
10	133	89.9	170	A60037	vasoactive intesti
11	120	81.1	55	VRGP	vasoactive intesti
12	118	79.7	165	VRCH	vasoactive intesti
13	117	79.1	28	A60303	vasoactive intesti
14	110	74.3	28	A38232	vasoactive intesti
15	107	72.3	25	JQ0361	vasoactive intesti
16	96	64.9	27	A61071	pituitary adenylat
17	96	64.9	38	A49165	pituitary adenylat
18	96	64.9	173	S34767	neuropeptides prec
19	96	64.9	175	A37786	pituitary adenylat
20	96	64.9	176	I84638	pituitary adenylat
21	96	64.9	176	A34044	pituitary adenylat
22	96	64.9	195	I50456	pituitary adenylat
23	90	60.8	38	A61070	pituitary adenylat
24	80	54.1	35	HWGHD	exendin-2 - Gila m
25	78	52.7	38	HWGHS	exendin-1 - Mexica
26	69	46.6	103	A41410	somatoliberin prec
27	68	45.9	104	A32731	somatoliberin prec
28	60	40.5	27	SECH	secretin - chicken
29	59	39.9	44	RHBS	somatoliberin - bo

30 54 36.5 44 1 RHPG somatoliberin - pi
31 54 36.5 108 1 RHHUS somatoliberin prec
32 53 35.8 206 2 I51301 proglucagon - chic
33 53 35.8 443 2 C70392 gamma-glutamyl pho
34 53 35.8 654 2 T08600 hypothetical prote
35 52 35.1 11 2 A32428 amine oxidase (cop
36 52 35.1 276 2 AD1860 two-component resp
37 51 34.5 1661 2 T21986 hypothetical prote
38 51 34.5 1663 2 T21993 hypothetical prote
39 50 33.8 168 2 F90095 hypothetical prote
40 50 33.8 194 2 T27608 hypothetical prote
41 50 33.8 194 2 T29172 hypothetical prote
42 49.5 33.4 330 2 F96775 hypothetical prote
43 49.5 33.4 332 1 S58283 myb-related protei
44 49 33.1 27 2 A27267 secretin - dog
45 49 33.1 310 2 B97763 hypothetical prote

ALIGNMENTS

RESULT 1

B60071
vasoactive intestinal peptide - rhesus macaque
C:Species: Macaca mulatta (rhesus macaque)
C:Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 20-Mar-1998
C:Accession: B60071
R:Yu, J.; Xin, Y.; Eng, J.; Yalow, R.S.
Regul. Pept. 32, 39-45, 1991

A:Title: Rhesus monkey gastroenteropancreatic hormones: relationship to human sequences
A:Reference number: A60071; MUID:91164506; PMID:2003150
A:Accession: B60071
A>Status: protein sequence not shown
A:Molecule type: protein
A:Residues: 1-28 <YUA>
A:Cross-references: UNIPARC:UPI000002D1C0
A>Note: the sequence is identical with the human sequence
C:Superfamily: glucagon
C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 89.9%; Score 133; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 4.7e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKYLSILN 28
||||| ||||||| ||||||| |||||||

Db 1 HSDAVFTDNYTLRKQMAVKYLSILN 28
||||| ||||||| ||||||| |||||||

RESULT 2

A60304
vasoactive intestinal peptide - dog
N:Alternate names: VIP
C:Species: Canis lupus familiaris (dog)
C:Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change 09-Jul-2004
C:Accession: A60304
R:Eng, J.; Pan, Y.C.E.; Kaufman, J.P.; Yalow, R.S.
Regul. Pept. Suppl. 3, S14, 1985
A:Title: Purification and sequencing of dog and guinea pig VIP's.
A:Reference number: A60304
A:Accession: A60304
A:Molecule type: protein
A:Residues: 1-28 <ENG>
A:Cross-references: UNIPROT:P04565; UNIPARC:UPI000002D1C0
C:Superfamily: glucagon
C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 89.9%; Score 133; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 4.7e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKYLSILN 28
||||| ||||||| ||||||| |||||||

Db 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

RESULT 3

VRBO

N;Contains: intestinal peptide precursor - bovine (fragments)
 C;Species: Bos primigenius taurus (cattle)
 C;Date: 26-Apr-1996 #sequence_revision 03-May-1996 #text_change 07-May-1999
 C;Accession: A61643; A61644; S09689
 R;Carlquist, M.; Kaiser, R.; Tatamoto, K.; Joernvall, H.; Mutt, V.
 Eur. J. Biochem. 144, 243-247, 1984
 A;Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper in
 A;Reference number: A61643; MUID:85027215; PMID:6549446
 A;Accession: A61643
 A;Molecule type: protein
 A;Residues: 1-27 <CAR>
 A;Cross-references: UNIPARC:UPI0000173515
 R;Carlquist, M.; Mutt, V.; Joernvall, H.
 PNAS Lett. 108, 457-460, 1979
 A;Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).
 A;Reference number: A61644; MUID:80092152; PMID:520589
 A;Accession: A61644
 A;Molecule type: protein
 A;Residues: 28-55 <CA2>
 A;Cross-references: UNIPARC:UPI000002D1C0
 R;Buscail, L.; Cauvin, A.; Gouret, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht,
 Biochim. Biophys. Acta 1038, 353-359, 1990
 A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A;Reference number: S09688; MUID:90254163; PMID:2340294
 A;Contents: annotation; comparison of mammalian PHI sequences
 C;Superfamily: glucagon
 C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
 F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
 F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 89.9%; Score 133; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 9.6e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKKYLNSILN 55

RESULT 4

VRBB

N;Contains: intestinal peptide precursor - rabbit (fragments)
 C;Species: Oryctolagus cuniculus (domestic rabbit)
 C;Date: 03-Feb-1993 #sequence_revision 19-Apr-1996 #text_change 20-Mar-1998
 C;Accession: B60415; A60415
 R;Gossen, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht,
 Peptides 11, 123-128, 1990
 A;Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.
 A;Reference number: A60415; MUID:90259845; PMID:2342988
 A;Accession: B60415
 A;Molecule type: protein
 A;Residues: 1-27 <GOS>
 A;Cross-references: UNIPARC:UPI00000351DB
 A;Accession: A60415
 A;Molecule type: protein
 A;Residues: 28-55 <GOS>
 A;Cross-references: UNIPARC:UPI00000351DB
 C;Superfamily: glucagon
 C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
 F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
 F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 89.9%; Score 133; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 9.6e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKKYLNSILN 55

RESULT 5

VRSH

N;Contains: intestinal peptide precursor - sheep (fragments)
 A;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
 C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
 C;Date: 31-Mar-1993 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
 C;Accession: B60072; A60072; G61063; A43974
 R;Bounjoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.
 Regul. Pept. 32, 169-179, 1991
 A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A;Reference number: A60072; MUID:91239834; PMID:2034821
 A;Accession: B60072
 A;Molecule type: protein
 A;Residues: 1-27 <BOU>
 A;Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515
 A;Accession: A60072
 A;Molecule type: protein
 A;Residues: 28-55 <BO2>
 A;Cross-references: UNIPARC:UPI000002D1C0
 R;Miyata, A.; Jiang, L.; Stibbs, H.H.; Arimura, A.
 Regul. Pept. 38, 145-154, 1992
 A;Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreact
 A;Reference number: A61063; MUID:92245116; PMID:1574609
 A;Accession: G61063
 A;Molecule type: protein
 A;Residues: 28-55 <MIY>
 A;Cross-references: UNIPARC:UPI000002D1C0
 A;Experimental source: hypothalamus, intestine
 R;Garvelin, G.

Peptides 11, 703-706, 1990
 A;Title: Isolation and primary structure of VIP from sheep brain.
 A;Reference number: A43974; MUID:91045331; PMID:2235680
 A;Accession: A43974
 A;Molecule type: protein
 A;Residues: 28-55 <GAR>
 A;Cross-references: UNIPARC:UPI000002D1C0
 A;Experimental source: brain
 C;Superfamily: glucagon

Query Match 89.9%; Score 133; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 9.6e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKKYLNSILN 55

RESULT 6

VRPG

N;Contains: intestinal peptide precursor - pig (fragments)
 C;Species: Sus scrofa domestica (domestic pig)
 C;Date: 24-Apr-1984 #sequence_revision 05-Jan-1996 #text_change 09-Jul-2004
 C;Accession: A01549; A60300; A01550; J00417; A56754; S09690
 R;Tatemoto, K.; Mutt, V.
 Proc. Natl. Acad. Sci. U.S.A. 78, 6603-6607, 1981
 A;Title: Isolation and characterization of the intestinal peptide porcine PHI (PHI-27),
 A;Reference number: A01549; MUID:82082498; PMID:6947244

A;Accession: A01549
A;Molecule type: protein
A;Residues: 1-27 <TAT>
A;Cross-references: UNIPROT:P01284; UNIPARC:UPI00000351DB
R;Tatemoto, K.
Regul. Pept. 6, 330, 1983
A;Title: PHI - a new brain-gut peptide.
A;Reference number: A60300
A;Accession: A60300
A;Molecule type: protein
A;Residues: 1-27 <TA2>
A;Cross-references: UNIPARC:UPI00000351DB
R;Mutt, V.; Said, S.I.
Eur. J. Biochem. 42, 581-589, 1974
A;Title: Structure of the porcine vasoactive intestinal octacosapeptide. The amino-acid
A;Reference number: A01550; MUID:74167323; PMID:4829446
A;Accession: A01550
A;Molecule type: protein
A;Residues: 28-55 <MUT>
A;Cross-references: UNIPARC:UPI000002D1C0
R;Gatvelin, G.; Andersson, M.; Dimaline, R.; Joernvall, H.; Mutt, V.
Peptides 9, 469-474, 1988
A;Title: Isolation and characterization of a variant form of vasoactive intestinal polypeptide
A;Reference number: J70417; MUID:86335763; PMID:2843830
A;Accession: J70417
A;Molecule type: protein
A;Residues: 28-58 <GAF>
A;Cross-references: UNIPARC:UPI000002B99A
A;Note: this extended form is active in a VIP assay but is probably an incompletely processed
R;Bodanszky, M.; Klausner, Y.S.; Lin, C.Y.; Mutt, V.; Said, S.I.
J. Am. Chem. Soc. 96, 4973-4978, 1974
A;Reference number: A26231; MUID:74308014; PMID:4854585
A;Contents: annotation
A;Note: a 28-residue peptide having the sequence and biological activities (in two assay
R;Ichiki, Y.; Kitamura, K.; Kangawa, K.; Matsuo, M.; Eto, T.
Biochem. Biophys. Res. Commun. 187, 1587-1593, 1992
A;Title: Organ distribution and characterization of porcine peptides (VIP, CGRP and PHI)
A;Reference number: A56754; MUID:93038640; PMID:1329741
A;Accession: A56754
A;Molecule type: protein
A;Residues: 1-24 <ICH>
A;Cross-references: UNIPARC:UPI0000173514
A;Experimental source: duodenum
A;Note: sequence extracted from NCBI backbone (NCBI:P114219)
R;Buscail, L.; Cauvin, A.; Gourellet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, B.
Biochim. Biophys. Acta 1038, 355-359, 1990
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A;Reference number: S09688; MUID:90254163; PMID:2340294
A;Contents: annotation
A;Comment: The biological source of vasoactive intestinal peptide is the duodenal mucosa
of myocardial contractility, stimulation of exocrine pancreatic secretion (in a secretin
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; neuropeptide
P;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
P;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
P;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
P;55/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gly

Query Match 89.9%; Score 133; DB 1; Length 58;
Best Local Similarity 96.4%; Pred. No. 1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||
Db 28 HSDAVFTDNYTLRKQMAVKKYLNSILN 55

RESULT 7
A60038
vasoactive intestinal peptide precursor - crab-eating macaque (fragment)
C;Species: Macaca fascicularis (crab-eating macaque)
C;Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C;Accession: A60038

R;Benson, D.L.; Isackson, P.J.; Jones, E.G.
Brain Res. Mol. Brain Res. 9, 169-174, 1991
A;Title: In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey
A;Reference number: A60038; MUID:91203476; PMID:1850073
A;Accession: A60038
A;Status: not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-145 <BEN>
A;Cross-references: UNIPROT:Q7M2Y9; UNIPARC:UPI000017662C
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi

Query Match 89.9%; Score 133; DB 2; Length 145;
Best Local Similarity 96.4%; Pred. No. 2.7e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||
Db 100 HSDAVFTDNYTLRKQMAVKKYLNSILN 127

RESULT 8
VRHU
vasoactive intestinal peptide precursor [validated] - human
N;Alternate names: Vip precursor
N;Contains: peptide histidine-methionine (PHM-27); peptide histidine-valine (PHV-42); va
C;Species: Homo sapiens (man)
C;Date: 14-Nov-1983 #sequence_revision 14-Nov-1983 #text_change 09-Jul-2004
C;Accession: A23296; A93313; A60205; A26361; A27419; JH0618; I51955; I56494; A01
R;Tsukada, T.; Horovitch, S.J.; Montminy, M.R.; Mandel, G.; Goodman, R.H.
DNA 4, 293-300, 1985
A;Title: Structure of the human vasoactive intestinal polypeptide gene.
A;Reference number: A90952; MUID:86004065; PMID:3899557
A;Accession: A23296
A;Molecule type: DNA
A;Residues: 1-170 <TSU>
A;Cross-references: UNIPROT:P01282; UNIPARC:UPI000003B343; GB:M11553; NID:g340243; PIDN
A;Note: the authors translated the codon GAA for residue 48 as Gln
R;Ittoh, N.; Obata, K.; Yanaihara, N.; Okamoto, H.
Nature 304, 547-549, 1983
A;Title: Human preprovasoactive intestinal polypeptide contains a novel PHI-27-like pept
A;Reference number: A93313; MUID:83271523; PMID:6571696
A;Accession: A93313
A;Molecule type: mRNA
A;Residues: 1-170 <ITO>
A;Cross-references: UNIPARC:UPI000003B343; GB:L00157; GB:J00320; NID:g340277; PIDN:AAA61
R;Gozes, I.; Gladi, E.; Shani, Y.
J. Neurochem. 48, 1136-1141, 1987
A;Title: Vasoactive intestinal peptide gene: putative mechanism of information storage a
A;Reference number: A60205; MUID:87140054; PMID:2434617
A;Accession: A60205
A;Molecule type: mRNA
A;Residues: 78-155 <GOZ>
A;Cross-references: UNIPARC:UPI000016B2F8; GB:M11645; GB:M32162; NID:g340250; PIDN:AAA61
A;Note: this abundant mRNA from a human buccal tumor line contains an unspliced intron
R;Linder, S.; Barkhem, T.; Norberg, A.; Persson, H.; Schalling, M.; Hokfelt, T.; Magnusson
Proc. Natl. Acad. Sci. U.S.A. 84, 605-609, 1987
A;Title: Structure and expression of the gene encoding the vasoactive intestinal peptide
A;Reference number: A26361; MUID:87092456; PMID:3025882
A;Accession: A26361
A;Molecule type: DNA
A;Residues: 1-115, 'L', 117-135, 'G', 137-170 <LIN>
A;Cross-references: UNIPARC:UPI000016B2FA; GB:M14623; NID:g340271; PIDN:AAA61288.1; PID:
A;Note: the authors translated the codon TTA for residue 116 as Ser and GGC for residue
R;Yiangou, Y.; Di Marzo, V.; Spokes, R.A.; Panico, M.; Morris, H.R.; Bloom, S.R.
J. Biol. Chem. 262, 14010-14013, 1987
A;Title: Isolation, characterization, and pharmacological actions of peptide histidine v
A;Reference number: A27419; MUID:88007645; PMID:3654650
A;Accession: A27419
A;Molecule type: protein
A;Residues: 81-122 <YIA>
A;Cross-references: UNIPARC:UPI00000351DE
R;Kitamura, K.; Kangawa, K.; Kawamoto, M.; Ichiki, Y.; Matsuo, H.; Eto, T.

Biochem. Biophys. Res. Commun. 185, 134-141, 1992
A;Title: Isolation and characterization of peptides which act on rat platelets, from a P
A;Reference number: JH0618; MUID:92287083; PMID:1318039
A;Accession: JH0618
A;Molecule type: protein
A;Residues: 125-152 <KIT>
A;Cross-references: UNIPARC:UPI000002D1C0
A;Experimental source: pheochromocytoma
R;Yamagami, T.; Ohsawa, K.; Nishizawa, M.; Inoue, C.; Gotoh, E.; Yanaihara, N.; Yamamoto
Ann. N. Y. Acad. Sci. 527, 87-102, 1988
A;Title: Complete nucleotide sequence of human vasoactive intestinal peptide/PHM-27 gene
A;Reference number: I51955; MUID:88267775; PMID:2839091
A;Accession: I51955
A;Status: translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 1-170 <RES>
A;Cross-references: UNIPARC:UPI000003B343; GB:M33027; NID:G340253; PIDN:AAA69515.1; PID:
R;Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 47, 1136-1141, 1987
A;Title: Vasoactive intestinal peptide gene: Putative mechanism of information storage a
A;Reference number: I56494
A;Accession: I56494
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 78-155 <RES>
A;Cross-references: UNIPARC:UPI000016B2F8; GB:M32162; NID:G340250; PIDN:AAA61285.1; PID:
R;Bloom, S.R.; Christofides, N.D.; Delamatter, J.; Buell, G.; Kawashima, E.; Polak, J.M.
Lancet 2, 1163-1165, 1983
A;Title: Diarrhoea in vipoma patients associated with cosecretion of a second active pep
A;Reference number: I56988; MUID:8406682; PMID:6139527
A;Accession: I56988
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: mRNA
A;Residues: 50-170 <RES>
A;Cross-references: UNIPARC:UPI000016B2F7; GB:M54930; NID:G340247; PIDN:AAA63268.1; PID:
C;Genetics:
A;Gene: GDB:VIP
A;Cross-references: GDB:120490; OMIM:192320
A;Map position: 6q26-6q27
A;Introns: 36/2; 77/2; 112/2; 156/2
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; glycoprotein; hormone; intestine; neurog
F;1-20/Domains: signal sequence #status predicted <SIG>
F;81-122/Product: peptide histidine-valine (PHV-42) #status experimental <PHV>
F;81-107/Product: peptide histidine-methionine (PHM-27) #status experimental <PHM>
F;125-152/Product: vasoactive intestinal peptide #status experimental <VIP>
F;68,133/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;107/Modified site: amidated carboxyl end (Met) (amide in mature form from following gl
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 89.9%; Score 133; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 3.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28
|||||
Db 125 HSDAVFTDNTYRLRKQMAVKKYLNSILN 152
|||||
RESULT 9
VIRT
vasoactive intestinal peptide precursor - rat
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 28-Feb-1986 #sequence revision 30-Jun-1993 #text change 09-Jul-2004
A;Accession: A60053; B60037; A01548; A28102; A60586; A60587; S09691
R;Giladi, E.; Shani, Y.; Gozes, I.
Brain Res. Mol. Brain Res. 7, 261-267, 1990
A;Title: The complete structure of the rat VIP gene.
A;Reference number: A60053; MUID:90244869; PMID:2159586
A;Accession: A60053
A;Molecule type: DNA
A;Residues: 1-170 <GIL>

A;Cross-references: UNIPROT:P01283; UNIPARC:UPI0000013884A
A;Note: the authors translated the codon GAG for residue 67 as Gln
R;Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A;Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A;Reference number: A60037; MUID:91232388; PMID:1851524
A;Accession: B60037
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 78-155 <LAM>
A;Cross-references: UNIPARC:UPI00000173511
R;Nishizawa, M.; Hayakawa, Y.; Yanaihara, N.; Okamoto, H.
FEBS Lett. 183, 55-59, 1985
A;Title: Nucleotide sequence divergence and functional constraint in VIP precursor mRNA
A;Reference number: A01548; MUID:85154612; PMID:3838518
A;Accession: A01548
A;Molecule type: mRNA
A;Residues: 9-170 <NIS>
A;Cross-references: UNIPARC:UPI0000170BA3; GB:X02341; NID:G57481; PIDN:CAA26200.1; PID:G
A;Experimental source: cerebral cortex
R;Goetzl, E.J.; Sreedharan, S.P.; Turck, C.W.
J. Biol. Chem. 263, 9083-9086, 1988
A;Title: Structurally distinctive vasoactive intestinal peptides from rat basophilic leu
A;Reference number: A28102; MUID:88243784; PMID:3379062
A;Accession: A28102
A;Molecule type: protein
A;Residues: 134-152 <GOP>
A;Cross-references: UNIPARC:UPI00000351E4
R;Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Rathe, J.; Robberecht, P.; Chris
Endocrinology 125, 1296-1302, 1989
A;Title: Peptide histidine isoleucinamide (PHI)-(1-27)-Gly as a new major form of PHI in
A;Reference number: A60586; MUID:89338237; PMID:2759027
A;Accession: A60586
A;Molecule type: protein
A;Residues: 81-108 <CAU>
A;Cross-references: UNIPARC:UPI00000173512
R;Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Robberecht, P.; Christophe, J.
Endocrinology 125, 2645-2655, 1989
A;Title: Variable distribution of three molecular forms of peptide histidine isoleucinar
A;Reference number: A60587; MUID:90005222; PMID:2792003
A;Accession: A60587
A;Molecule type: protein
A;Residues: 81-122 <CA2>
A;Cross-references: UNIPARC:UPI00000173513
R;Bucsal, L.; Cauvin, A.; Gourlet, P.; Gossens, D.; de Neef, P.; Rathe, J.; Robberecht,
Biochim. Biophys. Acta 1038, 355-359, 1990
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A;Reference number: S09688; MUID:90254163; PMID:2340294
A;Contents: annotation; comparison of mammalian PHI sequences
C;Comment: Two active peptides are released from the VIP precursor by cleavage at paired
C;Genetics:
A;Introns: 36/2; 77/2; 156/2
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
F;1-21/Domains: signal sequence #status predicted <SIG>
F;81-122/Product: PHI-42 #status experimental <PH42>
F;81-108/Product: PHI-27-Gly #status experimental <PHIG>
F;81-107/Product: peptide histidine-isoleucine (PHI-27) #status predicted <PHI>
F;125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F;107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
F;133/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 89.9%; Score 133; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 3.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28
|||||
Db 125 HSDAVFTDNTYRLRKQMAVKKYLNSILN 152
|||||

RESULT 10
A60303
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuro-peptide; vasodilator
F;1-27/Product: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Mus musculus (house mouse)
C;Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C;Accession: A60303; J49386
R;Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A;Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A;Reference number: A60303; MUID:91233388; PMID:1851524
A;Accession: A60303
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 1-170 <LAM>
A;Cross-references: UNIPROT:P32648; UNIPARC:UPI000002171F
R;Sena, M.; Bravo, D.T.; Von Agoston, D.; Waschek, J.A.
DNA Seq. 5, 25-29, 1994
A;Title: High conservation of upstream regulatory sequences on the human and mouse vasoactive intestinal peptide precursor - chicken
A;Accession: J49386
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 1-35 <RES>
A;Cross-references: UNIPARC:UPI0000160189; EMBL:X74297; NID:G895871; PIDN:CAAS23350.1; PIDN:CAAS23350.2
C;Comment: Two active peptides are released from the VIP precursor by cleavage at paired basic residues
C;Genetics:
A;Gene: VIP
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone; vasodilator
F;1-21/Domain: signal sequence #status predicted <SIG>
F;81-107/Product: PHI-27 #status predicted <PHI>
F;125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F;107/Modified site: amidated carboxyl end (ile) (amide in mature form from following gl
F;133/Binding site: carboxylate (asn) (covalent) #status predicted
F;152/Modified site: amidated carboxyl end (asn) (amide in mature form from following gl
Query Match 89.9%; Score 133; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 3.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTWYTRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTRLRKQMAVKKYLNSILN 152
RESULT 11
VRGP
vasoactive intestinal peptide precursor - guinea pig (fragments)
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Cavia porcellus (guinea pig)
C;Date: 31-Mar-1988 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
C;Accession: A26175; S09688; A57082; B60304
R;Du, B.H.; Eng, J.; Hulmes, J.D.; Chang, M.; Pan, Y.C.E.; Yalow, R.S.
Biochem. Biophys. Res. Commun. 128, 1093-1098, 1985
A;Title: Guinea pig has a unique mammalian VIP.
A;Reference number: A26175; MUID:85225523; PMID:4004849
A;Accession: A26175
A;Molecule type: protein
A;Residues: 28-55 <DUB>
A;Cross-references: UNIPROT:P04566; UNIPARC:UPI000000351E2
R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Robberecht, R.
Biochim. Biophys. Acta 1038, 355-359, 1990
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A;Reference number: S09688; MUID:90254163; PMID:2340294
A;Accession: S09688
A;Molecule type: protein
A;Residues: 1-27 <BUS>
A;Cross-references: UNIPARC:UPI00000173516
A;Accession: A57082
A;Molecule type: protein
A;Residues: 28-55 <BU2>
A;Cross-references: UNIPARC:UPI00000173516

C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuro-peptide; vasodilator
F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (asn) (in mature form) #status experimental
Query Match 81.1%; Score 120; DB 1; Length 55;
Best Local Similarity 82.1%; Pred. No. 8e-11;
Matches 23; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
Qy 1 HSDAVFTWYTRLRKQMAVKKYLNSILN 28
Db 28 HSDALFTDNYTRLRKQMAVKKYLNSVLN 55
RESULT 12
VRCH
vasoactive intestinal peptide precursor - chicken
C;Species: Gallus gallus (chicken)
C;Date: 24-Apr-1984 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C;Accession: S47470; A91425; A90720; A01551
R;Talbot, R.T.; Dunn, I.C.; Wilson, P.W.; Sang, H.M.; Sharp, P.J.
submitted to the EMBL Data Library, August 1994
A;Description: Evidence for alternative splicing of the chicken VIP gene.
A;Reference number: S47470
A;Accession: S47470
A;Molecule type: mRNA
A;Residues: 1-165 <TAL>
A;Cross-references: UNIPROT:P48143; UNIPARC:UPI000002B6C3; EMBL:X80906; NID:G531364; PIDN:G531364
FEB5 Lett. 60, 322-326, 1975
A;Title: Structure of the vasoactive intestinal octacosapeptide from chicken intestine.
A;Reference number: A91425; MUID:76210823; PMID:1227973
A;Accession: A91425
A;Molecule type: protein
A;Residues: 94-121 <NIL>
A;Cross-references: UNIPARC:UPI00000351E1
R;Bodanszky, M.; Lin, C.Y.; Yiotakis, A.E.; Mutt, V.; Said, S.I.
Bioorg. Chem. 5, 339-350, 1976
A;Title: Vasoactive intestinal peptide (VIP) from chicken. Synthesis and properties of
A;Reference number: A90720
A;Contents: Synthesis
A;Accession: A90720
A;Molecule type: protein
A;Residues: 107-121 <BOD>
A;Cross-references: UNIPARC:UPI00000173517
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; neuro-peptide
F;1-25/Domain: signal sequence #status predicted <SIG>
F;94-121/Product: vasoactive intestinal peptide #status experimental <MAT>
F;121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following gl
Query Match 79.7%; Score 118; DB 1; Length 165;
Best Local Similarity 85.2%; Pred. No. 5.1e-10;
Matches 23; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
Qy 1 HSDAVFTWYTRLRKQMAVKKYLNSIL 27
Db 94 HSDAVFTDNYSRFRKQMAVKKYLNSVL 120
RESULT 13
A60303
vasoactive intestinal peptide - smaller spotted catshark
C;Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish)
C;Date: 10-Nov-1992 #sequence_revision 10-Nov-1992 #text_change 09-Jul-2004
C;Accession: A60303; A60314; S07432
R;Dimoline, R.; Thwaites, D.T.; Young, J.; Lee, C.M.; Thorndyke, M.C.
Regul. Pept. 18, 356, 1987
A;Title: A novel family of VIP-like peptides from the dogfish Scyliorhinus canicula.
A;Reference number: A60303
A;Accession: A60303

A:Molecule type: protein
A:Residues: 1-28 <DI>
A:Cross-references: UNIPROT:P09685; UNIPARC:UPI000013884B
A:Note: this reference is an abstract
R:Dimaline, R.; Thorndyke, M.C.; Young, J.
Regul. Pept. 14, 1-10, 1986
A:Title: Isolation and partial sequence of elasmobranch VIP.
A:Reference number: A60314; MUID:86234323; PMID:3715063
A:Accession: A60314
A:Molecule type: protein
A:Residues: 1-10 <DI>
A:Cross-references: UNIPARC:UPI000017662D
R:Dimaline, R.; Young, J.; Thwaites, D.T.; Lee, C.M.; Thorndyke, M.C.
Ann. N. Y. Acad. Sci. 527, 621-623, 1988
A:Title: Amino acid sequence of a biologically active vasoactive intestinal peptide from
A:Reference number: S07432
A:Accession: S07432
A>Status: preliminary
A:Molecule type: protein
A:Residues: 1-28 <DI>
A:Cross-references: UNIPARC:UPI000013884B
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; intestine; neuropeptide
P:28/Modified site: amidated carboxyl end (Ala) #status experimental

Query Match 79.1%; Score 117; DB 2; Length 28;
Best Local Similarity 81.5%; Pred. No. 1.1e-10;
Matches 22; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSIL 27
||||| :||:|||||:|:|:|
DB 1 HSDAVFTDNYSRIRKQMAVKKYLNSLL 27

RESULT 14
A38232
vasoactive intestinal peptide - North American opossum
N:Alternate names: VIP
C:Species: Didelphis virginiana, Didelphis marsupialis virginiana (North American opossum)
C:Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004
C:Accession: A38232
R:Eng, J.; Yu, J.; Rattan, S.; Yalow, R.S.
Proc. Natl. Acad. Sci. U.S.A. 89, 1809-1811, 1992
A:Title: Isolation and amino acid sequences of opossum vasoactive intestinal polypeptide
A:Reference number: A38232; MUID:92179271; PMID:1542675
A:Accession: A38232
A>Status: preliminary
A:Molecule type: protein
A:Residues: 1-28 <ENG>
A:Cross-references: UNIPROT:P39089; UNIPARC:UPI0000138846
A:Note: sequence extracted from NCBI backbone (NCBIP:87215)
C:Superfamily: glucagon
C:Keywords: duplication; intestine; neuropeptide

Query Match 74.3%; Score 110; DB 2; Length 28;
Best Local Similarity 78.6%; Pred. No. 1.2e-09;
Matches 22; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
||||| :||:|||||:|:|:|
DB 1 HSDAVFTDYSYTRLLKQMAVRKYLDLSLN 28

RESULT 15
JQ0361
vasoactive intestinal peptide - Atlantic cod (fragment)
C:Species: Gadus morhua (Atlantic cod)
C:Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 09-Jul-2004
C:Accession: JQ0361
R:Thwaites, D.T.; Young, J.; Thorndyke, M.C.; Dimaline, R.
Regul. Pept. 21, 436, 1988
A:Title: Isolation and characterisation of two teleost VIP's.
A:Reference number: JQ0361

A:Accession: JQ0361
A:Molecule type: protein
A:Residues: 1-25 <THW>
A:Cross-references: UNIPROT:P09684; UNIPARC:UPI0000138847
C:Superfamily: glucagon
C:Keywords: duplication; intestine; neuropeptide

Query Match 72.3%; Score 107; DB 2; Length 25;
Best Local Similarity 84.0%; Pred. No. 2.9e-09;
Matches 21; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNS 25
||||| :||:|||||:|:|:|
DB 1 HSDAVFTDNYSRFRKQMAVKKYLNS 25

Search completed: January 25, 2006, 15:20:37
Job time : 13.25 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:54:02 ; Search time 76 Seconds
(without alignments)
259.931 Million cell updates/sec

Title: US-10-626-719-6
Perfect score: 148
Sequence: 1 HSDAVFTWNTYRLRKQMAVKYKLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

UniProt_05.80.*

1: uniprot_sprot.*

2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	133	89.9	28	1 VIP_CANFA	P63289 canis fami
2	133	89.9	28	1 VIP_CAPHI	P63290 capra hircu
3	133	89.9	28	1 VIP_MACMU	P84488 macaca mula
4	133	89.9	28	1 VIP_SHEEP	P63291 ovis aries
5	133	89.9	72	1 VIP_PIG	P01284 sus scrofa
6	133	89.9	72	1 VIP_RABIT	P32649 oryctolagus
7	133	89.9	118	2 Q5TCY7 HUMAN	Q5TCY7 homo sapien
8	133	89.9	145	2 Q7M2Y9 MACFA	Q7M2Y9 macaca fasc
9	133	89.9	153	2 Q7TSR4 9MURI	Q7TSR4 arvicanthis
10	133	89.9	169	2 Q5TCY8 HUMAN	Q5TCY8 homo sapien
11	133	89.9	170	1 VIP_BOVIN	P81401 bos taurus
12	133	89.9	170	1 VIP_HUMAN	P01282 homo sapien
13	133	89.9	170	1 VIP_MOUSE	P32648 mus musculus
14	133	89.9	170	1 VIP_RAT	P01283 rattus norv
15	133	89.9	170	2 Q5TCY9 HUMAN	Q5TCY9 homo sapien
16	133	89.9	171	2 Q9D2Z7 MOUSE	Q9D2Z7 mus musculus
17	120	81.1	72	1 VIP_CAVPO	P04566 cavia porce
18	118	79.7	28	1 VIP_ALLMI	P48142 alligator m
19	118	79.7	28	1 VIP_RANRI	P81016 rana ridibu
20	118	79.7	70	2 Q4TZK3 ANAPL	Q4TZK3 anas platyr
21	118	79.7	86	2 Q4TZY9 AVAVES	Q4TZY9 anser anser
22	118	79.7	200	1 VIP_CHICK	P48143 gallus gall
23	118	79.7	200	1 VIP_MELGA	P45644 meleagris g
24	118	79.7	202	2 Q7ZYGB XENLA	Q7ZYGB xenopus lae
25	117	79.1	28	1 VIP_SCYCA	P09685 scyllorhinu
26	117	79.1	28	2 Q9PRI9 AMICA	Q9PRI9 amia calva
27	117	79.1	147	2 Q4SON2 TETNG	Q4SON2 tetraodon n
28	113	76.4	28	2 Q3PRN8 CARAU	Q3PRN8 carassius a
29	110	74.3	28	1 VIP_DIDMA	P39089 didelphis m
30	107	72.3	25	1 VIP_GADMO	P09684 gadus morhua
31	100	67.6	38	2 Q75W85_MISAN	Q75W85 misgurnus a

32	97	65.5	172	2	Q9DE29 BRARE	Q9de29 brachydanio
33	97	65.5	199	2	Q5XJ29 BRARE	Q5xj29 brachydanio
34	96	64.9	38	2	Q75W94 HALARO	Q75w94 halocynthia
35	96	64.9	38	2	Q8IU36 PERAM	Q8iu36 periplaneta
36	96	64.9	38	2	Q8IU37 SEPLE	Q8iu37 sepioteuthi
37	96	64.9	38	2	Q8IU38 HYDMA	Q8iu38 hydra magni
38	96	64.9	38	2	Q8IU39 DUGJA	Q8iu39 dugesia jap
39	96	64.9	38	2	Q75W87 ONCMY	Q75w87 oncorhynch
40	96	64.9	38	2	Q75W90 STELE	Q75w90 sardinops m
41	96	64.9	38	2	Q75W92 PERC	Q75w92 stephanolep
42	96	64.9	38	2	Q8AYP4 ACISC	Q8ayp4 acipenser s
43	96	64.9	38	2	Q8AYP5 TRAJP	Q8ayp5 trachurus j
44	96	64.9	62	2	Q53BI2 9PRIM	Q53bi2 gorilla gor
45	96	64.9	62	2	Q53BI3_PONPY	Q53bi3 pongo pygma

ALIGNMENTS

RESULT 1

ID	VIP_CANFA	STANDARD;	PRT;	28 AA.
AC	P63289; P04565;			
DT	13-AUG-1987 (Rel. 05, Created)			
DT	13-AUG-1987 (Rel. 05, Last sequence update)			
DT	13-SEP-2005 (Rel. 48, Last annotation update)			
DE	Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide).			
GN	Name=VIP;			
OS	Canis familiaris (Dog).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;			
OC	Canis.			
OX	NCBI_TaxID=9615;			
RN	[1]			
RP	PROTEIN SEQUENCE.			
RX	MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;			
RA	Eng J., Du B.-H., Kaufman J.-P., Yalow R.S.;			
RT	"Purification and amino acid sequences of dog, goat and guinea pig VIPs."			
RL	Peptides 7 Suppl. 1:17-20(1986).			
CC	FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.			
CC	SUBCELLULAR LOCATION: Secreted.			
CC	SIMILARITY: Belongs to the glucagon family.			
CC	This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.			
CC	PIR: A60304; A60304.			
DR	HSSP; P18509; 1GEA.			
DR	Ensembl; ENSCAFG0000000538; Canis familiaris.			
DR	InterPro; IPR000532; Glucagon.			
DR	Pfam; PF00123; Hormone.2; 1.			
DR	PRINTS; PR00275; GLUCAGON.			
DR	SMART; SM00070; GLUCA; 1.			
DR	PROSITE; PS00260; GLUCAGON; 1.			
KW	Amidation; Direct protein sequencing; Glucagon family; Hormone.			
FT	MOD RES 28			
SQ	SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;			

Query Match 89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Oy 1 HSDAVFTWNTYRLRKQMAVKYKLSILN 28

Db 1 HSDAVFTWNTYRLRKQMAVKYKLSILN 28

```

RT Rhesus monkey gastroenteropancreatic hormones: relationship to human
RL sequences."
CC Regul. Pept. 32:39-45(1991).
CC -I- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -I- SUBCELLULAR LOCATION: Secreted.
CC -I- SIMILARITY: Belongs to the glucagon family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC PIR; B60071; B60071.
CC InterPro; IPR000532; Glucagon.
CC Pfam; PF00123; Hormone 2; 1.
CC PRINTS; PR00275; GLUCAGON.
CC SMART; SM00070; GLUCA, 1.
CC PROSITE; PS00260; GLUCAGON; 1.
CC Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD RES 28 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;

Query Match 89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
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DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
    ||||| ||||| ||||| ||||| |||||

RESULT 4
VIP_SHEEP
ID VIP_SHEEP STANDARD; PRT; 28 AA.
AC P63291; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
DE Name=VIP;
GN Ovis aries (Sheep).
OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Ovis.
OX NCBI_TaxID=9940;
RN [1]
RP PROTEIN SEQUENCE.
RC TISSUE=Brain;
RX MEDLINE=91045331; PubMed=2235680; DOI=10.1016/0196-9781(90)90184-7;
RA Gafvelin G.;
RT "Isolation and primary structure of VIP from sheep brain.";
RL Peptides 11:703-706(1990).
RN [2]
RP PROTEIN SEQUENCE.
RC TISSUE=Small intestine;
RX MEDLINE=91239834; PubMed=2034821; DOI=10.1016/0167-0115(91)90044-H;
RA Bounjoua Y., Vandermeers A., Robberecht P., Vandermeers-Piret M.C.,
RA Christophe J.;
RT "Purification and amino acid sequence of vasoactive intestinal
RT peptide, peptide histidine isoleucinamide and secretin from the ovine
RT small intestine.";
RL Regul. Pept. 32:169-179(1991).
RN [3]
RP PROTEIN SEQUENCE.
RC TISSUE=Hypothalamus, and Intestine;
RX PubMed=1574609; DOI=10.1016/0167-0115(92)90053-W;
RA Miyata A., Jiang L., Scibbs H.H., Arimura A.;
RT "Chemical characterization of vasoactive intestinal polypeptide-like
RT immunoreactivity in ovine hypothalamus and intestine.";

```

RL Regul. Pept. 38:145-154(1992).
 CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycogenolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the glucagon family.
 CC -----
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 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC -----
 DR PIR; B60072; VRSH.
 DR HSPP; P18509; 1GEA.
 DR InterPro: IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone_2; 1.
 DR PRINTS; PR00275; GLUCAGON.
 DR SMART; SM00070; GLUCA; 1.
 DR PROSITE; PS00260; GLUCAGON; 1.
 KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
 FT MOD RES 28 Asparagine amide.
 SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;
 Query Match 89.9%; Score 133; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.3e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Qy 1 HSDAVFTWNYTLRLKQMAVKYLSILN 28
 Db 1 HSDAVFTDNYTLRLKQMAVKYLSILN 28
 RESULT 5
 VIP_PIG STANDARD; PRT; 72 AA.
 AC P01284; QSTRN0;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 21-JUL-1986 (Rel. 01, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
 DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
 DE (Vasoactive intestinal polypeptide)] (Fragment).
 GN Name=VIP;
 OS Sus scrofa (Pig).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
 OC Sus.
 OX NCBI_TaxID=9823;
 RN [1]
 RP PROTEIN SEQUENCE OF 1-27.
 RX MEDLINE=82082498; PubMed=6947244;
 RA Tatamoto K., Mutt V.;
 RT "Isolation and characterization of the intestinal peptide porcine PHI
 RL (PHI-27), a new member of the glucagon-secretin family.";
 RL Proc. Natl. Acad. Sci. U.S.A. 78:6603-6607(1981).
 RN [2]
 RP PROTEIN SEQUENCE OF 1-24.
 RC TISSUE=Duodenum;
 RX MEDLINE=93038640; PubMed=1329741;
 RA Ichiki Y., Kitamura K., Kangawa K., Kawamoto M., Matsuo H., Eto T.;
 RT "Organ distribution and characterization of porcine peptides (VIP,
 RT CGRP and PHI) that increase cAMP in rat platelets.";
 RL Biochem. Biophys. Res. Commun. 187:1587-1593(1992).
 RN [3]
 RP PROTEIN SEQUENCE OF 28-58.
 RX MEDLINE=88335763; PubMed=2843830; DOI=10.1016/0196-9781(88)90149-0;
 RA Gavellin G., Andersson M., Dimaline R., Jorvall H., Mutt V.;
 RT "Isolation and characterization of a variant form of vasoactive
 RL intestinal polypeptide";
 RL Peptides 9:469-474(1988).
 RN [4]
 RP PROTEIN SEQUENCE OF 45-72.

RX MEDLINE=74167323; PubMed=4829446;
 RA Mutt V., Said S.I.;
 RT "Structure of the porcine vasoactive intestinal octacosapeptide. The
 RT amino-acid sequence. Use of kallikrein in its determination.";
 RL Eur. J. Biochem. 42:581-589(1974).
 RN [5]
 RP SYNTHESIS OF VIP.
 RX MEDLINE=74308014; PubMed=4854585;
 RA Bodanazky M., Klausner Y.S., Lin C.Y., Mutt V., Said S.I.;
 RT "Synthesis of the vasoactive intestinal peptide (VIP).";
 RL J. Am. Chem. Soc. 96:4973-4978(1974).
 CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycogenolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -1- FUNCTION: PHI also causes vasodilation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
 CC with the human precursor sequence.
 CC -1- SIMILARITY: Belongs to the glucagon family.
 CC -----
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 CC removed.
 CC -----
 DR PIR; A01549; VRFG.
 DR HSPP; P18509; 1GEA.
 DR InterPro: IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone_2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 KW Amidation; Cleavage on pair of basic residues;
 KW Direct protein sequencing; Glucagon family; Hormone.
 FT PEPTIDE 1 27 Intestinal peptide PHI-27.
 FT MOD RES 45 72 Vasoactive intestinal peptide.
 FT MOD RES 27 27 Isoleucine amide.
 FT MOD RES 72 72 Asparagine amide.
 FT NON TER 1 1
 FT NON TER 72 72
 SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;
 Query Match 89.9%; Score 133; DB 1; Length 72;
 Best Local Similarity 96.4%; Pred. No. 6.3e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Qy 1 HSDAVFTWNYTLRLKQMAVKYLSILN 28
 Db 45 HSDAVFTDNYTLRLKQMAVKYLSILN 72
 RESULT 6
 VIP_RABIT STANDARD; PRT; 72 AA.
 AC P32649;
 DT 01-OCT-1993 (Rel. 27, Created)
 DT 01-OCT-1993 (Rel. 27, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
 DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
 DE (Vasoactive intestinal polypeptide)] (Fragment).
 GN Name=VIP;
 OS Oryctolagus cuniculus (Rabbit).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
 OC Oryctolagus.
 OX NCBI_TaxID=9986;
 RN [1]
 RP PROTEIN SEQUENCE.
 RC TISSUE=Small intestine;
 RX MEDLINE=90259845; PubMed=2342988; DOI=10.1016/0196-9781(90)90120-T;
 RA Gossen D., Buscail L., Cauvin A., Gourlet P., de Neef P., Rathe J.,
 RA Robberecht P., Vandermeers-Piret M.C., Vandermeers A., Christophe J.;

"Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.";

RT peptides 11:123-128 (1990).

-!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.

-!- FUNCTION: PHI also causes vasodilation.

-!- SUBCELLULAR LOCATION: Secreted.

-!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.

-!- SIMILARITY: Belongs to the glucagon family.

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HSPSP; P18509; IGFA.

InterPro: IPR000532; Glucagon.

Pfam; PF001233; Hormone_2; 2.

PRINTS; PR00275; GLUCAGON.

PROSITE; PS00260; GLUCAGON; 2.

Direct protein sequencing; Glucagon family; Hormone.

AMidation; Cleavage on pair of basic residues;

Peptide 1 27 Intestinal peptide PHI-27.

Peptide 45 72 Vasoactive intestinal peptide.

MOD_RES 27 27 Isoleucine amide.

MOD_RES 72 72 Asparagine amide.

NON_TER 1 1

NON_TER 72 72

SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;

Query Match 89.9%; Score 133; DB 1; Length 72;

Best Local Similarity 96.4%; Pred. No. 6.3e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28

DB 45 HSDAVFTDNYTLRKQMAVKKYLNSILN 72

RESULT 7

QSTCY7 HUMAN

ID QSTCY7 HUMAN PRELIMINARY; PRT; 118 AA.

AC QSTCY7;

DT 01-FEB-2005 (T-EMBLrel. 29, Created)

DT 01-FEB-2005 (T-EMBLrel. 29, Last sequence update)

DT 01-FEB-2005 (T-EMBLrel. 29, Last annotation update)

DE Vasoactive intestinal peptide (fragment).

OS Names:VIP; ORFNames=RP4-546K19.1-003;

OS Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;

OC Homo.

OC NCBI_TaxID=9606;

OR [1]

RN NUCLEOTIDE SEQUENCE.

RA Johnson C.;

RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.

RL EMBL; AL133356; CAI21766.1; -; Genomic DNA.

DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0003179; F:hormone activity; IEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF001233; Hormone_2; 2.

DR PRINTS; PR00275; GLUCAGON.

DR SMART; SM00070; GLUCA; 2.

DR PROSITE; PS00260; GLUCAGON; 2.

FT NON_TER 1

FT NON_TER 118

SEQUENCE 118 AA; 13385 MW; D1BC9CA4459FC2D95 CRC64;

Query Match 89.9%; Score 133; DB 2; Length 118;

Best Local Similarity 96.4%; Pred. No. 1.1e-11;

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DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON TER 1
SQ SEQUENCE 153 AA; 17171 MW; 9C15095D6E147A15 CRC64;

  Query Match      89.9%; Score 133; DB 2; Length 153;
  Best Local Similarity 96.4%; Pred. No. 1.4e-11;
  Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
  ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 108 HSDAVFTDNYTRLRKQMAVKKYLNSILN 135

RESULT 10
Q5TCY8 HUMAN
ID Q5TCY8 HUMAN PRELIMINARY; PRT; 169 AA.
AC Q5TCY8
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4_546K19.1-002;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CAI21765.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 169 AA; 19081 MW; F325BDFEF47132C3 CRC64;

  Query Match      89.9%; Score 133; DB 2; Length 169;
  Best Local Similarity 96.4%; Pred. No. 1.5e-11;
  Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
  ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 124 HSDAVFTDNYTRLRKQMAVKKYLNSILN 151

RESULT 11
VIP BOVIN
ID - VIP BOVIN STANDARD; PRT; 170 AA.
AC P81401; Q8M177;
DT 15-DEC-1998 (Rel. 37, Created)
DT 25-OCT-2004 (Rel. 45, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22092342; PubMed=12097482;
RA Hamelink C., Lee H.-W., Chen Y., Grimaldi M., Eiden L.E.;
RT "Coincident elevation of cAMP and calcium influx by PACAP-27 synergistically regulates vasoactive intestinal polypeptide gene transcription through a novel PKA-independent signaling pathway.";
RT J. Neurosci. 22:5310-5320(2002).
RN [2]
RN Name=VIP;
RP PROTEIN SEQUENCE OF 81-107.
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
TISSUE=Duodenum;

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RX MEDLINE=85027215; PubMed=6548446;
RA Carlquist M., Kaiser R., Tatemoto K., Joernvall H., Mutt V.;
RT "A novel form of the polypeptide PHI isolated in high yield from bovine upper intestine. Relationships to other peptides of the glucagon-secreting family.";
RT Eur. J. Biochem. 144:243-247(1984).
RL [3]
RN PROTEIN SEQUENCE OF 125-152.
RC TISSUE=Intestine;
RX MEDLINE=80092152; PubMed=520589; DOI=10.1016/0014-5793(79)80587-6;
RA Carlquist M., Mutt V., Joernvall H.;
RT "Isolation and characterization of bovine vasoactive intestinal peptide (VIP).";
RT FEBS Lett. 108:457-460(1979).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL Outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.
CC -----
DR EMBL; AF503910; AAM28152.1; -; mRNA.
DR HSSP; P18509; 1GEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 25 Potential.
FT PROPEP 26 79 . Intestinal peptide PHI-27.
FT PEPTIDE 81 107
FT PROPEP 111 122 Vasoactive intestinal peptide.
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group).
SQ SEQUENCE 170 AA; 19165 MW; 9C6A6049AF7BFF81 CRC64;

  Query Match      89.9%; Score 133; DB 1; Length 170;
  Best Local Similarity 96.4%; Pred. No. 1.6e-11;
  Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
  ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 125 HSDAVFTDNYTRLRKQMAVKKYLNSILN 152

RESULT 12
VIP HUMAN
ID - VIP HUMAN STANDARD; PRT; 170 AA.
AC P01282; Q96QK3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42; Intestinal peptide PHM-27 (peptide histidine methioninamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

```

OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OX Homo.
NCBI_TaxID=9606;
[1]
RX NUCLEOTIDE SEQUENCE.
RP MEDLINE=83271523; PubMed=6571696;
RA Itoh N., Obata K.-I., Yanaiharu N., Okamoto H.;
RT "Human preprovasoactive intestinal polypeptide contains a novel PHI-
RT 27-like peptide, PHM-27.";
RL Nature 304:547-549(1983).
[2]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=88267775; PubMed=2839091;
RA Yanagami T., Ohsawa K., Nishizawa M., Inoue C., Gotoh E.,
RA Yanaiharu N., Yamamoto H., Okamoto H.;
RT "Complete nucleotide sequence of human vasoactive intestinal
RT peptide/PHM-27 gene and its inducible promoter.";
RL Ann. N. Y. Acad. Sci. 527:87-102(1988).
[3]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=86004065; PubMed=3899557;
RA Tsukada T., Horovitch S.J., Montminy M.R., Mandel G., Goodman R.H.;
RT "Structure of the human vasoactive intestinal polypeptide gene.";
RL DNA 4:293-300(1985).
[4]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=87092456; PubMed=3025882;
RA Linder S., Barkhem T., Norberg A., Persson H., Schalling M.,
RA Hoekfelt T., Magnusson G.;
RT "Structure and expression of the gene encoding the vasoactive
RT intestinal peptide precursor.";
RL Proc. Natl. Acad. Sci. U.S.A. 84:605-609(1987).
[5]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=86016352; PubMed=2995945; DOI=10.1016/0196-9781(85)90016-6;
RA Delamater J.P., Buell G.N., Kawashima E., Polak J.M., Bloom S.R.;
RT "Vasoactive intestinal peptide: expression of the prohormone in
RT bacterial cells.";
RL Peptides 6:95-102(1985).
[6]
RN NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RC TISSUE=Prostate;
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Straubeberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Rulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahy J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butlerfield Y.S.N., Krzywinski M.I., Skalska U., Smalhus D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
[7]
RN NUCLEOTIDE SEQUENCE OF 8-170.
RX MEDLINE=86313155; PubMed=3748844; DOI=10.1016/0196-9781(86)90156-7;
RA Gozes I., Bodener M., Shani Y., Fridkin M.;
RT "Structure and expression of the vasoactive intestinal peptide (VIP)
RT gene in a human tumor.";
RL Peptides 7:1-6(1986).
[8]
RN NUCLEOTIDE SEQUENCE OF 50-170.
RX TISSUE=Pancratic carcinoma;
RC

RX MEDLINE=84066682; PubMed=6139527; DOI=10.1016/S0140-6736(83)91215-1;
RA Bloom S.R., Delamater J.F., Kawashima E., Christofides N.D.,
RA Buell G., Polak J.M.;
RT "Diarrhoea in vipoma patients associated with cosecretion of a second
RT active peptide (peptide histidine isoleucine) explained by single
RT coding gene.";
RL Lancet 2:1163-1165(1983).
[9]
RN NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=87140054; PubMed=2434617;
RA Gozes I., Giladi E., Shani Y.;
RT "Vasoactive intestinal peptide gene: putative mechanism of information
RT storage at the RNA level.";
RL J. Neurochem. 47:1136-1141(1987).
[10]
RN PROTEIN SEQUENCE OF 81-122.
RX MEDLINE=88007645; PubMed=3654650;
RA Yangou Y., di Marzo V., Spokes R.A., Panico M., Morris H.R.,
RA Bloom S.R.;
RT "Isolation, characterization, and pharmacological actions of peptide
RT histidine valine 42, a novel prepro-vasoactive intestinal peptide-
RT derived peptide.";
RL J. Biol. Chem. 262:14010-14013(1987).
[11]
RN PROTEIN SEQUENCE OF 127-152.
RC TISSUE=Pheochromocytoma;
RX MEDLINE=92287083; PubMed=1318039;
RA Kitamura K., Kawaguchi K., Kawamoto M., Ichiki Y., Matsuo H., Eto T.;
RT "Isolation and characterization of peptides which act on rat
RT platelets, from a pheochromocytoma.";
RL Biochem. Biophys. Res. Commun. 185:134-141(1992).
[12]
RN STRUCTURE BY NMR OF VIP.
RX MEDLINE=91322343; PubMed=1863695;
RA Theriault Y., Boulanger Y., St Pierre S.;
RT "Structural determination of the vasoactive intestinal peptide by two-
RT dimensional H-NMR spectroscopy.";
RL Biopolymers 31:459-464(1991).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHM and PHV also cause vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; L00157; AAA61289.1; -; Genomic DNA.
CC EMBL; L00154; AAA61289.1; JOINED; Genomic DNA.
CC EMBL; L00155; AAA61289.1; JOINED; Genomic DNA.
CC EMBL; L00156; AAA61289.1; JOINED; Genomic DNA.
CC EMBL; M33027; AAA69515.1; -; Genomic DNA.
CC EMBL; M11553; AAA61284.1; -; Genomic DNA.
CC EMBL; M11549; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M11550; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M11551; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M11552; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M14623; AAA61288.1; -; Genomic DNA.
CC EMBL; M14619; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M14620; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M14621; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M14622; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M36610; AAA61286.1; -; Genomic DNA.
CC EMBL; M36606; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; M36607; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; M36608; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; M36609; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; BC009794; AAH09794.1; -; mRNA.
CC EMBL; M36634; AAA61287.1; -; mRNA.

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DR EMBL; M54930; AAA63268.1; -; mRNA.
DR EMBL; M32162; AAA61285.1; -; Genomic DNA.
DR EMBL; M31645; AAA61285.1; JOINED; Genomic DNA.
DR PIR; A23296; VRHU.
DR HSSP; P18509; IGEA.
DR Ensembl; ENSG00000146459; Homo sapiens.
DR HGNC; HGNC:12693; VIP.
DR H-InvDB; HIX0006306; -.
DR MIM; 192320; -.
DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
DR GO; GO:0007589; P:fluid secretion; TAS.
DR GO; GO:0007186; P:G-protein coupled receptor protein signalin...; TAS.
DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 20 Potential.
FT PROPEP 21 79
FT PEPTIDE 81 122 Intestinal peptide PHV-42.
FT PEPTIDE 81 107 Intestinal peptide PHM-27.
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152 Methionine amide (G-108 provides amide group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group)
FT CONFLICT 96 97 Qu -> PP (in Ref. 7).
FT CONFLICT 113 113 Missing (in Ref. 6).
FT CONFLICT 116 116 S -> L (in Ref. 4).
FT CONFLICT 136 136 R -> G (in Ref. 4).
SQ SEQUENCE 170 AA; 19169 MW; 93BC0177F89508FD CRC64;

Query Match 89.9%; Score 133; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 1.6e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

RESULT 13
VIP_MOUSE STANDARD; PRT; 170 AA.
AC P32648;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucinamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
DE polypeptide]].
GN Name=Vip;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
[1]
RN RATTUS NORVEGICUS (Rat).
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
[2]
RN RATTUS NORVEGICUS (Rat).
RX MEDLINE=95201289; PubMed=7894056;
RA Sena M., Bravo D.T., Agoston D., Waschek J.A.;
```

```
RT "High conservation of upstream regulatory sequences on the human and mouse vasoactive intestinal peptide (VIP) genes.";
RL DNA Seq. 5:25-29(1994).
CC -|- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -|- FUNCTION: PHM also causes vasodilation.
CC -|- SUBCELLULAR LOCATION: Secreted.
CC -|- SIMILARITY: Belongs to the glucagon family.
CC This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.
CC -----
CC EMBL; X74297; CAA52350.1; -; Genomic DNA.
CC PIR; A60037; A60037.
CC HSSP; P18509; IGEA.
CC Ensembl; ENSMUSG00000019772; Mus musculus.
CC MGI; MGI:98933; Vip.
CC GO; GO:0005615; C:extracellular space; TAS.
CC InterPro; IPR000532; Glucagon.
CC Pfam; PF00123; Hormone_2; 2.
CC PRINTS; PR00275; GLUCAGON.
CC PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues; Glucagon family; Glycoprotein; Hormone; Signal.
FT SIGNAL 1 21 By similarity.
FT PROPEP 22 79
FT PEPTIDE 81 122 Intestinal peptide PHI-42 (By similarity).
FT PEPTIDE 81 107 Intestinal peptide PHI-27.
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152 Isoleucine amide (G-108 provides amide group).
FT MOD_RES 133 133 Asparagine amide (G-153 provides amide group).
FT CARBOHYD 133 133 N-linked (GlcNAc...) (Potential).
SQ SEQUENCE 170 AA; 19049 MW; 0164C831F8F5C73D CRC64;

Query Match 89.9%; Score 133; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 1.6e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

RESULT 14
VIP_RAT STANDARD; PRT; 170 AA.
AC P01283;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucinamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
GN Name=Vip;
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
[1]
RN NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=90244869; PubMed=2159586; DOI=10.1016/0169-328X(90)90036-D;
RA Gilladi E., Shani Y., Gozes I.;
RT "The complete structure of the rat VIP gene.";
```

```
RL Brain Res. Mol. Brain Res. 7:261-267(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 9-170.
RC TISSUE=Brain cortex;
RX MEDLINE=85154612; PubMed=3838518; DOI=10.1016/0014-5793(85)80953-4;
RA Nishizawa M., Hayakawa Y., Yanaihara N., Okamoto H.;
RN "Nucleotide sequence divergence and functional constraint in VIP
RT precursor mRNA evolution between human and rat.";
RL FEBS Lett. 183:55-59(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=91232388; PubMed=4851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RN "Characterization of the gene and messages for vasoactive intestinal
RT polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [4]
RP PROTEIN SEQUENCE OF 134-152.
RX MEDLINE=88243784; PubMed=3379062;
RA Goetzl E.J., Sreedharan S.P., Turck C.W.;
RN "Structurally distinctive vasoactive intestinal peptides from rat
RT basophilic leukemia cells.";
RL J. Biol. Chem. 263:9083-9086(1988).
CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -1- FUNCTION: PHI also causes vasodilation.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the glucagon family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR EMBL; X02341; CAA26200.1; -; mRNA.
DR PIR; A60053; VRRP.
DR HS8P; P18509; IGBA.
DR Ensembl; ENSRNOG00000018808; Rattus norvegicus.
DR RGD; 621647; Vip.
DR GO; GO:0042311; P:vasodilation; NAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
DR Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;
KW Signal.
FT SIGNAL 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT -----
FT Intestinal peptide PHV-42 (By
FT similarity).
FT PEPTIDE 81 107
FT Intestinal peptide PHI-27.
FT PEPTIDE 125 152
FT Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107
FT Isoleucine amide (G-108 provides amide
FT group).
FT MOD_RES 152 152
FT Asparagine amide (G-153 provides amide
FT group).
FT CARBOHYD 68 68
FT N-linked (GlcNAc... ) (Potential).
FT CARBOHYD 133 133
FT N-linked (GlcNAc... ) (Potential).
SQ SEQUENCE 170 AA; 19079 MW; 202AE82EBBD190B CRC64;

Query Match 89.9%; Score 133; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. NO. 1.6e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNTYRLRKQMAVKKYLNSILN 152
```

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RESULT 15
QSTCY9_HUMAN
ID QSTCY9 HUMAN PRELIMINARY; PRT; 170 AA.
AC QSTCY9;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-001;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CA121764.1; -; Genomic_DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 170 AA; 19168 MW; 93EC0177F89508FD CRC64;

Query Match 89.9%; Score 133; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. NO. 1.6e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNTYRLRKQMAVKKYLNSILN 152

Search completed: January 25, 2006, 15:18:40
Job time : 77 secs
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-7

Perfect score: 143

Sequence: 1 HSDAVFTDNYRRLRQMAVKYLNLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : A_Geneseq_21.*

- 1: Geneseqp1980s.*
- 2: Geneseqp1990s.*
- 3: Geneseqp2000s.*
- 4: Geneseqp2001s.*
- 5: Geneseqp2002s.*
- 6: Geneseqp2003as.*
- 7: Geneseqp2003bs.*
- 8: Geneseqp2004s.*
- 9: Geneseqp2005s.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	143	100.0	28	5	Abg94069 Human vas
2	140	97.9	28	5	Abg94066 Human vas
3	139	97.2	28	5	Abg94068 Human vas
4	138	96.5	28	5	Abg94067 Human vas
5	137	95.8	28	1	Aap10172 VIP. 3/20
6	137	95.8	28	1	Aap10139 Sequence
7	137	95.8	28	2	Aar34943 Porcine V
8	137	95.8	28	2	Aar40272 Native VI
9	137	95.8	28	2	Aar53111 Bronchodi
10	137	95.8	28	2	Aar53109 Bronchodi
11	137	95.8	28	2	Aar53110 Bronchodi
12	137	95.8	28	2	Aar87092 Vasoacti
13	137	95.8	28	2	Aar83785 VIP. 2/19
14	137	95.8	28	2	Aar97810 Vasoacti
15	137	95.8	28	2	Aar93023 Human glu
16	137	95.8	28	2	Aaw65188 Vasoacti
17	137	95.8	28	2	Aaw06120 Human VIP
18	137	95.8	28	2	Aaw06119 Mouse VIP
19	137	95.8	28	2	Aaw06114 Rabbit VI
20	137	95.8	28	2	Aaw06113 Macaque V
21	137	95.8	28	2	Aaw06121 Pig VIP p
22	137	95.8	28	2	Aaw06122 Goat VIP
23	137	95.8	28	2	Aaw06115 Dog VIP p
24	137	95.8	28	2	Aaw06112 Sheep VIP

25	137	95.8	28	2	AAW37791	Vasoacti
26	137	95.8	28	2	AAW71677	Vasoacti
27	137	95.8	28	2	AAV30769	Vasoacti
28	137	95.8	28	2	AAV44196	Human vas
29	137	95.8	28	3	AAV94560	Vasoacti
30	137	95.8	28	4	AAV85707	Peptide h
31	137	95.8	28	4	AAV85710	Peptide h
32	137	95.8	28	4	AAV91279	Vasoacti
33	137	95.8	28	4	AAV1278	Vasoacti
34	137	95.8	28	4	AAE12028	Porcine v
35	137	95.8	28	4	AAV37111	Human vas
36	137	95.8	28	4	AAV70459	Vasoacti
37	137	95.8	28	4	AAV50845	Human pro
38	137	95.8	28	4	AAV09653	Porcine i
39	137	95.8	28	4	AAV45614	Native va
40	137	95.8	28	5	AAE19604	Human ste
41	137	95.8	28	5	AAE19627	Human vas
42	137	95.8	28	5	AAE19603	Human vas
43	137	95.8	28	5	AAV06677	Mammalian
44	137	95.8	28	5	AAU85989	Modified
45	137	95.8	28	5	AAU97783	Tumour sp

ALIGNMENTS

RESULT 1

ABG94069

ID ABG94069 standard; peptide; 28 AA.

XX AC ABG94069;

XX AC

DT 27-NOV-2002 (first entry)

XX XX

DE Human vasoactive intestinal polypeptide (VIP) analogue #117.

XX XX

KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;

KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;

KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;

KW sexual aversion; menopausal state; post-menopausal state; sexual desire;

KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;

KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;

KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.

XX OS Unidentified.

XX OS

PN US2002099003-A1.

XX XX

PD 25-JUL-2002.

XX XX

PF 13-AUG-2001; 2001US-00929818.

XX XX

PR 28-OCT-1997; 97US-00959057.

PR 28-OCT-1997; 97US-00959064.

PR 27-OCT-1998; 98US-00181316.

PR 04-FEB-2000; 2000US-00498522.

XX XX

PA (WILS/) WILSON L F.

PA (PLAC/) PLACE V A.

XX XX

PI Wilson LF, Place VA;

XX XX

DR WPI; 2002-697729/75.

XX XX

PT Treating sexual dysfunction in females comprises administering vasoactive

PT intestinal polypeptide or against to vagina and/or vulvar region.

XX XX

PS Claim 19; Page; 19pp; English.

XX XX

CC The invention relates to a method for treating sexual dysfunction in

CC females comprising administering a formulation comprising a vasoactive

CC agent comprising a vasoactive intestinal polypeptide and/or agonist to

CC the vagina and/or vulvar region. The method is used for preventing

CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952
 XX
 SQ Sequence 28 AA;

Query Match 100.0%; Score 143; DB 5; Length 28;
 Best Local Similarity 100.0%; Pred. No. 2.3e-12;
 Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
 |||||:|||||:|||||:|||||:|||||
 Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 2
 ABG94066
 ID ABG94066 standard; peptide; 28 AA.
 XX
 AC ABG94066;
 XX
 DT 27-NOV-2002 (first entry)
 XX
 DE Human vasoactive intestinal polypeptide (VIP) analogue #114.
 XX
 KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
 KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
 KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
 KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
 KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
 KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
 KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.

XX Unidentified.
 OS
 XX US2002099003-A1.
 XX
 PD 25-JUL-2002.
 XX
 PF 13-AUG-2001; 2001US-00929818.
 XX
 PR 28-OCT-1997; 97US-00959057.
 PR 28-OCT-1997; 97US-00959054.
 PR 27-OCT-1998; 98US-00181316.
 PR 04-FEB-2000; 2000US-00498522.
 XX
 PA (WILSON) WILSON L F.
 PA (PLAC) PLACE V A.
 XX
 XX Wilson LF, Place VA;
 XX
 DR WPI; 2002-697729/75.
 XX
 PT Treating sexual dysfunction in females comprises administering vasoactive
 PT intestinal polypeptide or against to vagina and/or vulvar region.
 XX
 PS Claim 19; Page; 19pp; English.

XX The invention relates to a method for treating sexual dysfunction in
 CC females comprising administering a formulation comprising a vasoactive
 CC agent comprising a vasoactive intestinal polypeptide and/or agonist to

CC the vagina and/or vulvar region. The method is used for preventing
 CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952
 XX
 SQ Sequence 28 AA;

Query Match 97.9%; Score 140; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 5.9e-12;
 Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
 |||||:|||||:|||||:|||||:|||||
 Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 3
 ABG94068
 ID ABG94068 standard; peptide; 28 AA.
 XX
 AC ABG94068;
 XX
 DT 27-NOV-2002 (first entry)
 XX
 DE Human vasoactive intestinal polypeptide (VIP) analogue #116.
 XX
 KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
 KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
 KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
 KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
 KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
 KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
 KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.

XX Unidentified.
 OS
 XX US2002099003-A1.
 XX
 PD 25-JUL-2002.
 XX
 PF 13-AUG-2001; 2001US-00929818.
 XX
 PR 28-OCT-1997; 97US-00959057.
 PR 28-OCT-1997; 97US-00959064.
 PR 27-OCT-1998; 98US-00181316.
 PR 04-FEB-2000; 2000US-00498522.
 XX
 PA (WILSON) WILSON L F.
 PA (PLAC) PLACE V A.
 XX
 XX Wilson LF, Place VA;
 XX
 DR WPI; 2002-697729/75.
 XX
 PT Treating sexual dysfunction in females comprises administering vasoactive
 PT intestinal polypeptide or against to vagina and/or vulvar region.
 XX
 PS Claim 19; Page; 19pp; English.
 XX
 CC The invention relates to a method for treating sexual dysfunction in
 CC females comprising administering a formulation comprising a vasoactive

CC agent comprising a vasoactive intestinal polypeptide and/or agonist to
 CC the vagina and/or vulvar region. The method is used for preventing
 CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952
 XX
 XX Sequence 28 AA;

Query Match 97.2%; Score 139; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 8.1e-12;
 Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKYLSILN 28
 |||||:|||||
 Db 1 HSDAVFTDNYQLRKQMAVKYLSILN 28
 |||||:|||||

RESULT 4
 ABG94067
 ID ABG94067 standard; peptide; 28 AA.
 AC ABG94067;
 XX
 XX 27-NOV-2002 (first entry)
 XX
 XX Human vasoactive intestinal polypeptide (VIP) analogue #115.
 DE
 XX Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
 KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
 KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
 KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
 KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
 KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
 KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.
 XX
 XX Unidentified.
 XX
 XX US2002099003-A1.
 XX
 XX 25-JUL-2002.
 XX
 XX 13-AUG-2001; 2001US-00929818.
 XX
 XX 28-OCT-1997; 97US-00959057.
 XX
 XX 28-OCT-1997; 97US-00959064.
 XX
 XX 27-OCT-1998; 98US-00181316.
 XX
 XX 04-FEB-2000; 2000US-00498522.
 XX
 XX (WILS/) WILSON L F.
 XX (PLAC/) PLACE V A.
 XX
 XX Wilson LF, Place VA;
 XX
 XX WPI; 2002-697729/75.
 XX
 XX Treating sexual dysfunction in females comprises administering vasoactive
 XX intestinal polypeptide or against to vagina and/or vulvar region.
 XX
 XX Claim 19; Page; 19pp; English.
 XX
 XX The invention relates to a method for treating sexual dysfunction in

CC females comprising administering a formulation comprising a vasoactive
 CC agent comprising a vasoactive intestinal polypeptide and/or agonist to
 CC the vagina and/or vulvar region. The method is used for preventing
 CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952
 XX
 XX Sequence 28 AA;

Query Match 96.5%; Score 138; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.1e-11;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKYLSILN 28
 |||||:|||||
 Db 1 HSDAVFTDNYRLRKQMAVKYLSILN 28
 |||||:|||||

RESULT 5
 AAP10172
 ID AAP10172 standard; peptide; 28 AA.
 AC AAP10172;
 XX
 XX 25-MAR-2003 (revised)
 DT 21-DEC-1992 (first entry)
 XX
 XX VIP.
 DE
 XX Vasoactive intestinal polypeptide;
 KW allergic asthma. chemical mediator isolation-inhibiting action.
 XX
 XX Homo sapiens.
 XX
 XX JP56128721-A.
 XX
 XX 08-OCT-1981.
 XX
 XX 12-MAR-1980; 80JP-00030308.
 XX
 XX 12-MAR-1980; 80JP-00030308.
 XX
 XX (EISA) EISAI CO LTD.
 XX
 XX WPI; 1981-86052D/47.
 XX
 XX Antiallergic agent comprises peptide - contg. 28 amino acid units, is
 XX active against e.g. bronchial asthma and hay fever.
 XX
 XX Claim 1; Page 1; 3pp; Japanese.
 XX
 XX The sequence given can be used as the active component in an antiallergic
 XX agent. Vasoactive intestinal polypeptide (VIP) has chemical mediator
 XX isolation-inhibiting action and is effective for therapy and prevention
 XX of various allergic diseases, such as allergic rhinitis, bronchial
 XX asthma, allergic asthma, hay fever, urticaria, eczema, atopic dermatitis
 XX etc. Since it also has specific bronchial smooth muscle relaxant action,
 XX it is esp. useful for treating and preventing bronchial and allergic
 XX asthma. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
 XX 2003 to correct PA field.)

SQ Sequence 28 AA;

Query Match 95.8%; Score 137; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.5e-11;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
 |||||
 Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 |||||

RESULT 6
 AAP71039
 ID AAP71039 standard; peptide; 28 AA.
 XX
 AC AAP71039;
 XX
 XX
 DT 03-OCT-2002 (revised)
 DT 05-APR-1991 (first entry)
 XX
 DE Sequence of active ingredient in hair growth promoting compen.
 XX
 KW Vasoactive intestinal tract polypeptide; digestive tract polypeptide;
 KW hair growth promoter.
 XX
 OS Synthetic.
 XX
 PN EP225639-A.
 XX
 PD 16-JUN-1987.
 XX
 PF 10-DEC-1986; 86EP-00117190.
 XX
 PR 10-DEC-1985; 85JP-00276099.
 XX
 PA (MEIJ) MEIJI SEIKA KAISHA.
 XX
 PI Yanaihara N, Watanabe S, Kasai M, Sato T, Kikkoji T;
 XX
 DR WPI; 1987-164873/24.
 XX
 PT Hair growth promoting compans. - contg. vasoactive intestinal polypeptide
 and carrier.
 XX
 PS Claim 1; Page 8; 10pp; English.
 XX
 CC When applied to the skin, the peptide causes a local increase in blood
 flow and promotes hair growth. It is the natural peptide known as
 CC vasoactive intestinal polypeptide which has been isolated from the
 CC digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)
 XX

SQ Sequence 28 AA;

Query Match 95.8%; Score 137; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.5e-11;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
 |||||
 Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 |||||

RESULT 7
 AAR34943
 ID AAR34943 standard; peptide; 28 AA.
 XX
 AC AAR34943;
 XX
 DT 25-MAR-2003 (revised)
 DT 28-JUL-1993 (first entry)
 XX
 DE Porcine VIP.
 XX

KW Vasoactive intestinal peptide; asthma; bronchodilation activity;
 KW bronchiotracheal constrictive disorders.
 XX
 OS Sus scrofa.
 XX
 PN EP536741-A2.
 XX
 PD 14-APR-1993.
 XX
 PF 08-OCT-1992; 92EP-00117185.
 XX
 PR 11-OCT-1991; 91US-00773747.
 XX
 PA (HOFF) HOFFMANN LA ROCHE & CO AG F.
 XX
 PI Bolin DR, Odonnell M;
 XX
 DR WPI; 1993-118996/15.
 XX
 PT New cyclic vasoactive intestinal peptide (VIP) analogues - are useful for
 PT the treatment of bronchotracheal constructive disorders e.g. asthma.
 XX
 PS Disclosure; Page 65; 141pp; English.
 XX
 CC The sequence is that of porcine vasoactive intestinal peptide (VIP) as
 CC claimed in EP-325044. The peptide sequence was used to design cyclic
 CC analogues of VIP which have enhanced bronchodilation activity without any
 CC observable side effects such as cardiovascular side effects. The
 CC bronchodilation produced by the analogues can be sustained for more than
 CC two hours. The analogues may be used for the treatment of bronchotracheal
 CC constrictive disorders, e.g. asthma. See also RR3944-5016. (Updated on 25
 CC -MAR-2003 to correct PN field.)
 XX

SQ Sequence 28 AA;

Query Match 95.8%; Score 137; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.5e-11;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
 |||||
 Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 |||||

RESULT 8
 AAR40272
 ID AAR40272 standard; protein; 28 AA.
 XX
 AC AAR40272;
 XX
 DT 25-MAR-2003 (revised)
 DT 09-FEB-1994 (first entry)
 XX
 DE Native VIP.
 XX
 KW Vasoactive intestinal peptide; VIP; bronchodilator; cardiovascular;
 KW side effect; bronchoconstrictive disorder; asthma.
 XX
 OS Sus scrofa.
 XX
 FH Key Location/Qualifiers
 FT Modified-site 28 /note= "C-terminal is amidated"
 XX
 PN US5234907-A.
 XX
 PD 10-AUG-1993.
 XX
 PF 24-APR-1991; 91US-00690300.
 XX
 PR 30-JUN-1989; 89US-00374503.
 XX
 PA (HOFF) HOFFMANN LA ROCHE INC.

XX Bolin DR;
XX WPI; 1993-264645/33.
XX New vasoactive intestinal peptide analogues - are potent bronchodilators
PT without cardiovascular side effects, used for treating, e.g. asthma.
XX Disclosure; Page 25-26; 66pp; English.
XX VIP (AAR40272) was used in the prodn. of analogues (AAR40273-78; generic
CC formulae; AAR40279-364; examples). The VIP analogues are potent
CC bronchodilators and have no cardiovascular side effects. They are used
CC for the treatment of bronchoconstrictive disorders, e.g. asthma. (Updated
CC on 25-MAR-2003 to correct PF field.)
XX Sequence 28 AA;
SQ
Query Match 95.8%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Oy 1 HSDAVFTDNYRLRQKQMAVKYKLSILN 28
Db 1 HSDAVFTDNYRLRQKQMAVKYKLSILN 28
RESULT 9
AAR53111
ID AAR53111 standard; peptide; 28 AA.
XX
AC AAR53111;
XX
DT 20-DEC-1994 (first entry)
XX
DE Bronchodilator peptide #21.
XX
PEptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
KW selectively; toxicity; mammal; bronchodilator.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Misc-difference 10 /note= "D-form residue"
FT Misc-difference 22 /note= "D-form residue"
FT Modified-site 28 /note= "Amidated C-terminal"
FT
PN JP06092991-A.
XX
PD 05-APR-1994.
XX
PP 28-FEB-1991; 91JP-00034335.
XX
PR 28-FEB-1991; 91JP-00034335.
XX
PA (DAIL) DAICEL CHEM IND LTD.
PA (MEIJ) MEIJI SEIKA KAISHA.
XX
DR WPI; 1994-147946/18.
XX
PT Active peptide(s), having smooth muscle relaxing activity - useful as
PT bronchodilators.
PN
XX
XX JP06092991-A.
XX
PD 05-APR-1994.
XX
PP 28-FEB-1991; 91JP-00034335.
XX
PR 28-FEB-1991; 91JP-00034335.
XX
PA (DAIL) DAICEL CHEM IND LTD.
PA (MEIJ) MEIJI SEIKA KAISHA.
XX
DR WPI; 1994-147946/18.
XX
PT Active peptide(s), having smooth muscle relaxing activity - useful as
PT bronchodilators.
XX
PS Disclosure; Page 5; 29pp; Japanese.
XX
CC The sequences given in AAR53091-111 are synthetic peptides based on
CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
CC the smooth muscle selectively and are only low toxic-non- toxic to
CC mammals. These peptides may be used as bronchodilators. They are prepared
CC by solid phase synthesis using a resin having an amino functional group

CC capable of bonding to the amino acid at the carboxy terminal through a
CC carboxyl group and fixing the peptide chain during the synthesis
XX
SQ Sequence 28 AA;
Query Match 95.8%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Oy 1 HSDAVFTDNYRLRQKQMAVKYKLSILN 28
Db 1 HSDAVFTDNYRLRQKQMAVKYKLSILN 28
RESULT 10
AAR53109
ID AAR53109 standard; peptide; 28 AA.
XX
AC AAR53109;
XX
DT 20-DEC-1994 (first entry)
XX
DE Bronchodilator peptide #19.
XX
PEptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
KW selectively; toxicity; mammal; bronchodilator.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Misc-difference 10 /note= "D-form residue"
FT Modified-site 28 /note= "Amidated C-terminal"
FT
PN JP06092991-A.
XX
PD 05-APR-1994.
XX
PP 28-FEB-1991; 91JP-00034335.
XX
PR 28-FEB-1991; 91JP-00034335.
XX
PA (DAIL) DAICEL CHEM IND LTD.
PA (MEIJ) MEIJI SEIKA KAISHA.
XX
DR WPI; 1994-147946/18.
XX
PT Active peptide(s), having smooth muscle relaxing activity - useful as
PT bronchodilators.
PN
XX
XX Disclosure; Page 5; 29pp; Japanese.
XX
CC The sequences given in AAR53091-111 are synthetic peptides based on
CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
CC the smooth muscle selectively and are only low toxic-non- toxic to
CC mammals. These peptides may be used as bronchodilators. They are prepared
CC by solid phase synthesis using a resin having an amino functional group
CC capable of bonding to the amino acid at the carboxy terminal through a
CC carboxyl group and fixing the peptide chain during the synthesis
XX
SQ Sequence 28 AA;
Query Match 95.8%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Oy 1 HSDAVFTDNYRLRQKQMAVKYKLSILN 28
Db 1 HSDAVFTDNYRLRQKQMAVKYKLSILN 28
RESULT 11

FT	Modified-site	28	/note= "amidated"
XX			
PN	FR2719316-A1.		
XX			
PD	03-NOV-1995.		
XX			
PF	28-APR-1994;	94FR-00005174.	
XX			
PR	28-APR-1994;	94FR-00005174.	
XX			
PA	(IDMI-) IDM IMMUNO-DESIGNED MOLECULES.		
XX			
PI	Midoux P, Erbacher P, Roche-Degremont A, Monsigny M;		
XX			
DR	WPI; 1995-375617/49.		
XX			
XX	New nucleic acid complexes with cationic polymers - useful for genetic transformation of cells.		
PT			
PT			
XX	Claim 11; Page 43; 58pp; French.		
PS			
XX			
CC	In novel complexes of negatively-charged nucleic acids and positively-charged polymers, the polymers comprise monomer subunits bearing NH3+ groups, at least 10% of which are replaced by uncharged amino groups bearing a substituent that has at least one -OH group and is not recognised by cell membrane receptors; the side-chain groups of the polymer (i.e. the NH3+ and/or OH groups) may be substid. by a group that is recognised by a cell membrane receptor, provided that at least 30% of the NH3+ groups remain free. The complexes are useful for transfecting on the nucleic acid sequences into particular cell types, depending on the identity of the cell membrane receptor ligands involved, e.g. for gene therapy or prepn. of vaccines. Preferred ligands are oligoglycoside antigens recognised by lectins, natural metabolites (such as biotin, tetrahydrofolate, folic acid or carnitine) or peptides (pref. vasoactive intestinal peptide, atrial natriuretic peptide, lipocortin, bradykinin, peptide hormones such as alpha-MSH, chemotactic factors and integrin ligands)		
XX			
SQ	Sequence 28 AA;		
	Query Match	95.8%;	Score 137; DB 2; Length 28;
	Best Local Similarity	96.4%;	Pred. No. 1.5e-11;
	Matches	27; Conservative	0; Mismatches 1; Indels 0; Gaps 0;
QY	1 HSDAVFTDNYRLRKQMAVKYKILNSILN 28		
DB	1 HSDAVFTDNYRLRKQMAVKYKILNSILN 28		
	RESULT 13		
AAR83785			
ID	AAR83785 standard; peptide; 28 AA.		
XX			
AC	AAR83785;		
XX			
DT	27-FEB-1996 (first entry)		
XX			
DE	VIP.		
XX			
KW	VIP; vasoactive intestinal polypeptide; peptide hormone; glucagon;		
KW	secretin; nervous system; digestive system; smooth muscle; relaxant;		
KW	bronchial asthma; impotence; therapy.		
XX			
OS	Sus scrofa.		
XX			
FH	Key	Location/Qualifiers	
FT	Misc-difference 29		
FT	/note= "amidated"		
XX			
PN	EP663406-A1.		
XX			
PD	19-JUL-1995.		

AAR53110			
ID	AAR53110 standard; peptide; 28 AA.		
XX			
AC	AAR53110;		
XX			
DT	20-DEC-1994 (first entry)		
XX			
DE	Bronchodilator peptide #20.		
XX			
KW	Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;		
KW	selectively; toxicity; mammal; bronchodilator.		
XX			
OS	Synthetic.		
XX			
FH	Key	Location/Qualifiers	
FT	Misc-difference 22		
FT	/note= "D-form residue"		
FT	Modified-site	28	
FT	/note= "Amidated C-terminal"		
XX			
PN	JP06092991-A.		
XX			
PD	05-APR-1994.		
XX			
PF	28-FEB-1991; 91JP-00034335.		
XX			
PR	28-FEB-1991; 91JP-00034335.		
XX			
PA	(DAIL) DAICEL CHEM IND LTD.		
PA	(MEIJ) MEIJI SEIKA KAISHA.		
XX			
DR	WPI; 1994-147946/18.		
XX			
XX	Active peptide(s), having smooth muscle relaxing activity - useful as bronchodilators.		
PT			
PT			
XX			
PS	Disclosure; Page 5; 29pp; Japanese.		
XX			
CC	The sequences given in AAR53091-111 are synthetic peptides based on vasoactive intestinal peptide (VIP) which have the activity of relaxing the smooth muscle selectively and are only low toxic-non- toxic to mammals. These peptides may be used as bronchodilators. They are prepared by solid phase synthesis using a resin having an amino functional group capable of bonding to the amino acid at the carboxy terminal through a carboxyl group and fixing the peptide chain during the synthesis		
XX			
SQ	Sequence 28 AA;		
	Query Match	95.8%;	Score 137; DB 2; Length 28;
	Best Local Similarity	96.4%;	Pred. No. 1.5e-11;
	Matches	27; Conservative	0; Mismatches 1; Indels 0; Gaps 0;
QY	1 HSDAVFTDNYRLRKQMAVKYKILNSILN 28		
DB	1 HSDAVFTDNYRLRKQMAVKYKILNSILN 28		
	RESULT 12		
AAR87092			
ID	AAR87092 standard; peptide; 28 AA.		
XX			
AC	AAR87092;		
XX			
DT	06-JUN-1996 (first entry)		
XX			
XX	Vasoactive intestinal peptide, forms part of gene transfer complex.		
XX			
XX	Porcine; VIP; cell surface receptor; ligand; gene transfer; transfection;		
KW	Gene therapy; vaccine.		
XX			
OS	Sus scrofa.		
XX			
FH	Key	Location/Qualifiers	

XX 19-DEC-1994; 94EP-00120126.
XX 20-DEC-1993; 93JP-00319815.
XX (SANWA) SANWA KAGAKU KENKYUSHO CO.
XX Noda H, Yamakawa H, Yoshina S, Iehida T, Tomiya N;
XX WPI; 1995-247502/33.
XX New modified form of vasoactive intestinal polypeptide - with C-terminal
XX substd. amide residue, has greater in vivo stability and persistence,
XX useful for treating asthma and impotence.
XX Disclosure; Page 3; 16pp; English.
XX This sequence represents vasoactive intestinal polypeptide (VIP). VIP is
XX a peptide hormone that shows smooth muscle relaxant activity. The
XX structure of VIP is similar to that of the other peptides in the glucagon
XX -secretin family, to which it belongs. VIP is present in the nervous
XX system and the digestive system tracts. It is also found in the lungs of
XX normal patients (however, it is not found in the lungs of people
XX suffering from bronchial asthma). The sequences shown in AAR83784 and
XX AAR83786 are analogues of this sequence. These analogues are found to be
XX resistant to protease digestion. The analogues can be used to treat
XX asthma (by inhalation) and impotence (percutaneously). Compared to
XX natural VIP, the analogue sequences have better in vivo stability. The
XX analogue sequences are also more persistent than natural VIP and have
XX excellent affinity for biological membranes
XX Sequence 28 AA;
Query Match 95.8%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
RESULT 14
AAR97810
ID AAR97810 standard; peptide; 28 AA.
AC AAR97810;
XX 22-AUG-1996 (first entry)
XX Vasoactive Intestinal Peptide VIP(1-28), for dermal ulcer treatment.
XX Vasoactive intestinal peptide; VIP; vasodilation; hyperkinemic; skin;
XX burn; decubitis; diabetes; ulcer; bed sore; pressure sore.
XX Synthetic.
XX Key Location/Qualifiers
XX Modified-site 28
XX /note= "amidated"
XX JP08040926-A.
XX 13-FEB-1996.
XX 03-AUG-1994; 94JP-00182457.
XX 03-AUG-1994; 94JP-00182457.
XX (YAKU-) YAKURIGAKU CHUO KENKYUSHO KK.
XX WPI; 1996-157021/16.
XX

PT Remedy for dermal ulcer - comprises vasoactive intestinal polypeptide as
XX active component.
XX Claim 1; Page 2; 4pp; Japanese.
XX Vasoactive intestinal peptide and related compounds are known to have
XX strong vasodilatory activity. They have now been found to be effective in
XX the treatment of skin ulcers, esp. decubitus ulcers but also burn ulcers,
XX diabetic ulcers, etc. VIP(1-28) is the preferred peptide for use in the
XX novel skin ulcer remedy
XX Sequence 28 AA;
Query Match 95.8%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
RESULT 15
AAR93023
ID AAR93023 standard; protein; 28 AA.
XX AAR93023;
XX 09-AUG-1996 (first entry)
XX Human glucagon degrading enzyme - VIP substrate.
XX Glucagon degrading enzyme; catalyst; cleavage; selectin; human; primer;
XX vasoactive intestinal peptide; VIP; pancreatic carcinoma cell line; PCR;
XX amplification; polymerase chain reaction; probe; expression vector;
XX eukaryote; SV40 promoter; COS-7.
XX Synthetic.
XX Key Location/Qualifiers
XX Cleavage-site 17..18
XX Modified-site 28
XX /note= "contains C-terminal amide group"
XX JP08023972-A.
XX 30-JAN-1996.
XX 19-JUL-1994; 94JP-00187936.
XX 19-JUL-1994; 94JP-00187936.
XX (SUNR) SUNTORY LTD.
XX WPI; 1996-133414/14.
XX New glucagon decomposing enzyme, and DNA encoding it - for specifically
XX cleaving glucagon and vasoactive intestinal peptide, in the prevention
XX and treatment of diseases caused by excess glucagon and VIP.
XX Claim 1; Page 2; 18pp; Japanese.
XX A novel gene encoding a glucagon degrading enzyme (GDE; AAT11575) was
XX isolated from a human pancreatic carcinoma cell line HPC-Yo cDNA library.
XX The enzyme has a mol. wt. 83 kD, a pH optimum of 5.8 and catalyses the
XX cleavage of glucagon, vasoactive intestinal peptide and selectin
XX (AAR93022-4). The gene encoding the enzyme was isolated by screening the
XX library with an anti-GDE peptide antibody, amplifying the inserts with
XX the primers AAT18903-4 and probing the fragments with the probe AAT18905.
XX This screening resulted in the full length clone designated lambda GD84-
XX 2. The coding region of the clone was subsequently PCR amplified by the
XX primers AAT11576-7 and inserted into the eukaryotic expression vector
XX pKDCR under control of the SV40 promoter for production of the protein in

CC COS-7 cells. The protein is useful in preventing and treating diseases
CC characterised by an excess of glucagon or vasoactive intestinal peptide

XX

Sequence 28 AA;

Sequence 28 AA; SQ

Query Match 95.8%; Score 137; DB 2; Length 28;

Best Local Similarity 96.4%; Pred. No. 1.5e-11;

Sequence	Matches	Conservative	Mismatches	Indels	Gaps
1	27	0	1	0	0

1 HSDAVFTDNYRRLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:08:20

search completed: 0.000
Job time : 77.875 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:08 ; Search time 21.875 Seconds
(without alignments)
105.825 Million cell updates/sec

Title: US-10-626-719-7
Perfect score: 143
Sequence: 1 HSDAVFTDNYRRLKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents_AA.*
1: /cgn2_6/ptodata/1/iaa/5_COMB.pep.*
2: /cgn2_6/ptodata/1/iaa/6_COMB.pep.*
3: /cgn2_6/ptodata/1/iaa/H_COMB.pep.*
4: /cgn2_6/ptodata/1/iaa/PCITUS_COMB.pep.*
5: /cgn2_6/ptodata/1/iaa/RE_COMB.pep.*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	143	100.0	28	2	US-09-528-200-7
2	137	95.8	28	1	US-07-690-300B-1
3	137	95.8	28	1	US-07-676-987A-1
4	137	95.8	28	1	US-07-868-906-1
5	137	95.8	28	1	US-08-201-092-1
6	137	95.8	28	1	US-07-924-054-11
7	137	95.8	28	1	US-08-243-082-1
8	137	95.8	28	1	US-08-361-443-1
9	137	95.8	28	1	US-08-288-681A-1
10	137	95.8	28	1	US-07-776-272-26
11	137	95.8	28	1	US-08-308-729-1
12	137	95.8	28	1	US-08-062-472B-40
13	137	95.8	28	1	US-08-171-701A-1
14	137	95.8	28	1	US-08-741-678-1
15	137	95.8	28	1	US-08-519-180-2
16	137	95.8	28	1	US-08-414-424-1
17	137	95.8	28	1	US-08-413-708B-1
18	137	95.8	28	1	US-08-818-253-37
19	137	95.8	28	1	US-08-897-624-1
20	137	95.8	28	2	US-08-930-845-1
21	137	95.8	28	2	US-08-952-568-3
22	137	95.8	28	2	US-08-952-568-4
23	137	95.8	28	2	US-08-952-568-5
24	137	95.8	28	2	US-08-952-568-6
25	137	95.8	28	2	US-08-952-568-10
26	137	95.8	28	2	US-08-952-568-11
27	137	95.8	28	2	US-08-952-568-12

28	137	95.8	28	2	US-08-952-568-13	Sequence 13, Appl
29	137	95.8	28	2	US-09-192-048-21	Sequence 21, Appl
30	137	95.8	28	2	US-08-893-749-2	Sequence 2, Appl
31	137	95.8	28	2	US-08-818-252-37	Sequence 37, Appl
32	137	95.8	28	2	US-09-260-846-16	Sequence 16, Appl
33	137	95.8	28	2	US-08-842-322-31	Sequence 31, Appl
34	137	95.8	28	2	US-09-333-842-1	Sequence 1, Appl
35	137	95.8	28	2	US-09-446-352B-1	Sequence 1, Appl
36	137	95.8	28	2	US-09-316-919-53	Sequence 53, Appl
37	137	95.8	28	2	US-09-630-335-1	Sequence 1, Appl
38	137	95.8	28	2	US-09-629-632A-1	Sequence 1, Appl
39	137	95.8	28	2	US-09-528-200-196	Sequence 196, App
40	137	95.8	28	2	US-09-316-920A-53	Sequence 53, Appl
41	137	95.8	28	2	US-09-646-046-1	Sequence 1, Appl
42	137	95.8	28	2	US-09-285-422-1	Sequence 1, Appl
43	137	95.8	28	2	US-10-100-256B-1	Sequence 1, Appl
44	137	95.8	28	2	US-09-623-548A-454	Sequence 454, App
45	137	95.8	28	2	US-09-623-548A-455	Sequence 455, App

ALIGNMENTS

RESULT 1
US-09-528-200-7
; Sequence 7, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 7
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-528-200-7

Query Match 100.0%; Score 143; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 1.3e-12;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRRLKQMAVKYLSILN 28
Db 1 HSDAVFTDNYRRLKQMAVKYLSILN 28

RESULT 2
US-07-690-300B-1
; Sequence 1, Application US/07690300B
; Patent No. 5234907
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:

ADDRESSEE: Hoffmann-La Roche Inc.
STREET: 340 Kingsland Street
CITY: Nutley
STATE: New Jersey
COUNTRY: USA
ZIP: 07110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/690,300B
FILING DATE: 19910424
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/374,503
FILING DATE: 30-JUN-1989
ATTORNEY/AGENT INFORMATION:
NAME: Pokras, Bruce A.
REGISTRATION NUMBER: 32,748
REFERENCE/DOCKET NUMBER: 8480
TELECOMMUNICATION INFORMATION:
TELEPHONE: (201) 235-5801
TELEFAX: (201) 235-3500
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Sus scrofa
US-07-690-300B-1

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 3
US-07-676-987A-1
Sequence 1, Application US/07676987A
Patent No. 5273963
GENERAL INFORMATION:
APPLICANT: TERRY W. MOODY
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
CELL AND NONSMALL CELL LUNG CANCERS
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: ROTHWELL, FIGG, ERNST & KURZ
STREET: 555 THIRTEENTH ST. N.W.
CITY: WASHINGTON
STATE: D. C.
COUNTRY: U.S.
ZIP: 20004
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/676,987A
FILING DATE: 19910329
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: REPPER, GEORGE R.

REGISTRATION NUMBER: 31,414
REFERENCE/DOCKET NUMBER: 1783-101
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 783-6040
TELEFAX: (202) 783-6031
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-07-676-987A-1

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 4
US-07-868-906-1
Sequence 1, Application US/07868906
Patent No. 5376637
GENERAL INFORMATION:
APPLICANT: Sawai, Kiichi
APPLICANT: Kuroono, Masayasu
APPLICANT: Mitani, Takahiko
APPLICANT: Sato, Makoto
APPLICANT: Takahashi, Haruo
APPLICANT: Ohwaki, Hiroyuki
TITLE OF INVENTION: PHARMACEUTICAL PREPARATION CONTAINING
VASOACTIVE INTESTINAL POLYPEPTIDE OR ITS ANALOGUE
NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
ADDRESSEE: Nikaido, Marmelstein, Murray & Oram
STREET: 1725 K St. N.W. Suite 1000
CITY: Washington
STATE: D.C.
COUNTRY: USA
ZIP: 20006
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/868,906
FILING DATE: 19920416
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 3-90671
FILING DATE: 22-APR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Oram Jr., George E.
REGISTRATION NUMBER: 27,931
REFERENCE/DOCKET NUMBER: 920238N
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 659-2930
TELEFAX: (202) 887-0357
TELEX: 440142
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-07-868-906-1

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28

RESULT 5

US-08-201-092-1
; Sequence 1, Application US/08201092
; Patent No. 5428015
; GENERAL INFORMATION:
; APPLICANT: KURONO, Masayasu
; APPLICANT: MITANI, Takahiko
; APPLICANT: TAKAHASHI, Haruo
; APPLICANT: SAWAI, Kiichi
; TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: ANALOGUES AND USE THEREOF
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Armstrong, Nikaido, Marmelstein, Kubovcik, &
; ADDRESSEE: Murray
; STREET: 1725 K St. N.W. Suite 1000
; CITY: Washington
; STATE: D. C.
; COUNTRY: U. S. A.
; ZIP: 20006

COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/201,092
; FILING DATE: 24-FEB-1994

CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 2-165739
; FILING DATE: 26-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 2-408425
; FILING DATE: 27-DEC-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/704,143
; FILING DATE: 22-MAY-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Oram Jr., George E.
; REGISTRATION NUMBER: 27,931
; REFERENCE/DOCKET NUMBER: N910809
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202)-659-2930
; TELEFAX: (202)-887-0357
; TELEX: 440142

INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; FRAGMENT TYPE: C-terminal
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Small intestine, proximal
US-08-201-092-1

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28

RESULT 6

US-07-924-054-11
; Sequence 1, Application US/07924054
; Patent No. 5486472
; GENERAL INFORMATION:
; APPLICANT: SUZUKI, No. 5486472uhiro
; APPLICANT: KITADA, Chieko
; APPLICANT: TSUDA, Masao
; TITLE OF INVENTION: ANTIBODY TO PACAP AND USE THEREOF
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: DAVID G. CONLIN; DIKE, BRONSTEIN, ROBERTS &
; ADDRESSEE: CUSHMAN
; STREET: 130 Water Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: US
; ZIP: 02109

COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/924,054
; FILING DATE: 19920903

CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: RESNICK, David S
; REGISTRATION NUMBER: 34235
; REFERENCE/DOCKET NUMBER: 40805
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617)523-3400
; TELEFAX: (617)523-6440
; TELEX: 200291 STRE UR
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-07-924-054-11

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28

RESULT 7

US-08-243-082-1
; Sequence 1, Application US/08243082
; Patent No. 5506120
; GENERAL INFORMATION:
; APPLICANT: YAMAMOTO, Hiroaki
; APPLICANT: YAMASHITA, Kunihiko
; TITLE OF INVENTION: METHOD OF PRODUCING PEPTIDES OR
; TITLE OF INVENTION: PROTEINS
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Spencer, Frank & Schneider
; STREET: 1111 Nineteenth Street, N.W.
; CITY: Washington
; STATE: D.C.
; COUNTRY: U.S.A.
; ZIP: 20036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/243,082
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/853,754
FILING DATE: 05-JUN-1992
ATTORNEY/AGENT INFORMATION:
NAME: Schnellier, John W.
REGISTRATION NUMBER: 26,031
REFERENCE/DOCKET NUMBER: KUWAT 0010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 828-8000
TELEFAX: (202) 828-8038
TELEX: SPENCER 64267
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
US-08-243-082-1

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 8
US-08-361-443-1
Sequence 1, Application US/08361443
Patent No. 5521157
GENERAL INFORMATION:
APPLICANT: No. 5521157a, Hitoshi
APPLICANT: Yamakawa, Hidehumi
APPLICANT: Yoshina, Shigeaki
APPLICANT: Ishida, Tsutomu
APPLICANT: Tomiya, No. 5521157oru
TITLE OF INVENTION: MODIFIED POLYPEPTIDE COMPOUND AND USE OF
TITLE OF INVENTION: THE SAME
NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
ADDRESSEE: SUGHRUB, MION, ZINN, MACPEAK & SEAS
STREET: 2100 Pennsylvania Ave.
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/361,443
FILING DATE:
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP Hei. 5-319815
FILING DATE: 20-DEC-1993
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid

STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-361-443-1

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 9
US-08-288-681A-1
Sequence 1, Application US/08288681A
Patent No. 5595897
GENERAL INFORMATION:
APPLICANT: MIDOUX, PATRICK; ERBACHER, ANNIE-CLAUDE;
APPLICANT: PATRICK; ROCHE-DEGREMONT, ANNIE-CLAUDE;
APPLICANT: MONSIGNY, MICHEL
TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC
TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
TITLE OF INVENTION: PREPARATION AND THEIR USAGE FOR TRANSCRIPTION
TITLE OF INVENTION: OF CELLS
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: BIERMAN & MUSERLIAN
STREET: 600 THIRD AVENUE
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
ZIP: 10016
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/288,681A
FILING DATE: 10-AUG-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR/94/05174
FILING DATE: 28-APR-1994
ATTORNEY/AGENT INFORMATION:
NAME: CHARLES A. MUSERLIAN
REGISTRATION NUMBER: 19,683
REFERENCE/DOCKET NUMBER: 410.005
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 661-8000
TELEFAX: (212) 661-8002
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28
TYPE: Amino Acid
STRANDEDNESS: Unknown
TOPOLOGY: Unknown
MOLECULE TYPE: PEPTIDE
US-08-288-681A-1

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 10
US-07-776-272-26

; Sequence 26, Application US/07776272
; Patent No. 5612454
; GENERAL INFORMATION:
; APPLICANT: Kaminuma, Toshihiko
; APPLICANT: Iida, Toshii
; APPLICANT: Tajima, Masahiro
; TITLE OF INVENTION: Process for Purification of Polypeptide
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Wegner, Cantor, Mueller & Player
; STREET: 1233 20th St. N.W. P.O. Box 18218
; CITY: Washington
; STATE: District of Columbia
; COUNTRY: United States of America
; ZIP: 20036-8218
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07776,272
; FILING DATE: 19911129
; CLASSIFICATION: 530
; ATTORNEY/AGENT INFORMATION:
; NAME: Player, William E
; REGISTRATION NUMBER: 31,409
; REFERENCE/DOCKET NUMBER: P-450-23167
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-887-0400
; TELEFAX: 202-887-0605
; TELEX: 440706
; INFORMATION FOR SEQ ID NO: 26:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: YES
US-07-776-272-26

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 11
US-08-308-729-1
; Sequence 1, Application US/08308729
; Patent No. 5677419
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Cyclic Vasoactive Peptide
; NUMBER OF SEQUENCES: 73
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/308,729

; FILING DATE:
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/153,530
; FILING DATE:
; APPLICATION NUMBER: US 07/773,747
; FILING DATE: 11-OCT-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8322
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa
; PUBLICATION INFORMATION:
; DOCUMENT NUMBER: EP 325 044 A A
; FILING DATE: 22-DEC-1987
; PUBLICATION DATE: 26-JUL-1989
; RELEVANT RESIDUES IN SEQ ID NO: 1: FROM 18 TO 23
US-08-308-729-1

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 12
US-08-062-472B-40
; Sequence 40, Application US/08062472B
; Patent No. 5695954
; GENERAL INFORMATION:
; APPLICANT: Sherwood, Nancy G M
; APPLICANT: Parker, David B
; APPLICANT: McRory, John E
; APPLICANT: Lescheid, David W
; TITLE OF INVENTION: DNA ENCODING TWO FISH NEUROPEPTIDES
; NUMBER OF SEQUENCES: 49
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: KLARQUIST, SPARKMAN, CAMPBELL, LEIGH &
; ADDRESSEE: WHINSTON, LLP
; STREET: ONE WORLD TRADE CENTER, SUITE 1600, 121 S.W.
; CITY: PORTLAND
; STATE: OREGON
; COUNTRY: USA
; ZIP: 97204-2988
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/062,472B
; FILING DATE: 14-MAY-1993
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: POLLEY, RICHARD J
; REGISTRATION NUMBER: 28107
; TELECOMMUNICATION INFORMATION:

```
/
/ TELEPHONE: (503) 226-7391
/ TELEFAX: (503) 228-9446
/ INFORMATION FOR SEQ ID NO: 40:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 28 amino acids
/ TYPE: amino acid
/ STRANDEDNESS: single
/ TOPOLOGY: linear
/ MOLECULE TYPE: peptide
US-08-062-472B-40

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 13
US-08-171-701A-1
; Sequence 1, Application US/08171701A
; Patent No. 5721211
; GENERAL INFORMATION:
; APPLICANT:
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
; TREATING SMALL CELL AND NONSMALL
; CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 3
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3+ Floppy Disk
; COMPUTER: IBM PC Compatible
; OPERATING SYSTEM: MS-DOS
; SOFTWARE: WordPerfect, Version 5.1 Plus
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/171,701A
; FILING DATE: December 22, 1993
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 Amino Acids
; TYPE: Amino Acid
; TOPOLOGY: Linear
; MOLECULE TYPE: Peptide
; FRAGMENT TYPE: N-terminal
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 1
; OTHER INFORMATION:
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 28
; OTHER INFORMATION:
US-08-171-701A-1

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 14
US-08-741-678-1
; Sequence 1, Application US/08741678
; Patent No. 5733762
; GENERAL INFORMATION:
; APPLICANT: MIDOUX, PATRICK; ERBACHER,
; APPLICANT: PATRICK; ROCHE-DEGREMONT,
; APPLICANT: ANNIE-CLAUDE; MONSIGNY, MICHEL
; TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC

/
/ TELEPHONE: (503) 226-7391
/ TELEFAX: (503) 228-9446
/ INFORMATION FOR SEQ ID NO: 40:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 28 amino acids
/ TYPE: amino acid
/ STRANDEDNESS: single
/ TOPOLOGY: linear
/ MOLECULE TYPE: peptide
US-08-062-472B-40

TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
PREPARATION AND THEIR USE FOR THE
TRANSFECTION OF CELLS
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
ADDRESSEE: BIERMAN & MUSERLIAN
STREET: 600 THIRD AVENUE
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
ZIP: 10016
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/741,678
FILING DATE: 31-OCT-1996
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: MUSERLIAN, CHARLES A
REGISTRATION NUMBER: 19,683
REFERENCE/DOCKET NUMBER: 410.005-1-1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 661-8000
TELEFAX: (212) 661-8002
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28
TYPE: Amino Acid
STRANDEDNESS: Unknown
TOPOLOGY: Unknown
MOLECULE TYPE: PEPTIDE
US-08-741-678-1

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 15
US-08-519-180-2
; Sequence 2, Application US/08519180
; Patent No. 5770570
; GENERAL INFORMATION:
; APPLICANT: PAUL, SUDHIR
; APPLICANT: YASUKO, NODA
; APPLICANT: ISRAEL, RUBINSTEIN
; TITLE OF INVENTION: A METHOD OF DELIVERING A VASOACTIVE
; ENCAPSULATED VASOACTIVE
; TITLE OF INVENTION: INTESTINAL POLYPEPTIDE, AND A METHOD OF MAKING THE
; ENCAPSULATED VASOACTIVE INTESTINAL POLYPEPTIDE
; NUMBER OF SEQUENCES: 13
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: CUSHMAN, DARBY & CUSHMAN
; STREET: 1100 NEW YORK AVENUE, N.W.
; CITY: WASHINGTON
; STATE: D.C.
; COUNTRY: USA
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/519,180
; FILING DATE: 25-AUG-1995
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; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/224488
; FILING DATE: 07-APR-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: SEMINAUER, JEFFREY A.
; REGISTRATION NUMBER: 31,933
; REFERENCE/DOCKET NUMBER: 4464/98971
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-861-3000
; TELEFAX: 202-822-0944
; TELEX: 6714627 CUSH
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; US-08-519-180-2

Query Match      95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy      1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
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Db      1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28
      |||||
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Job time : 21.875 secs

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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:48 ; Search time 53.625 Seconds
(without alignments) 218.167 Million cell updates

Title: US-10-626-719-7

Perfect score: 143

Sequence: 1 HSDAVFTDNYRRLRKQMAVKYILNSILN 28

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scoring cable: 2500002
Gapop 10.0 ; Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0

Maximum DB seq length: 200000000
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Post-processing: Minimum Match 0%

Loss processing: Minimum Match 0%
Maximum Match 100%

Maximum match 100%
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3: /cgn2_6/ptodata1/pubpaa/US09_PUBCOMB.pcp:*
4: /cgn2_6/ptodata1/pubpaa/US10A_PUBCOMB.pcp:*
5: /cgn2_6/ptodata1/pubpaa/US10B_PUBCOMB.pcp:*
6: /cgn2_6/ptodata1/pubpaa/US11_PUBCOMB.pcp:*

```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
1	143	100.0	28	3	US-09-929-818-118	Sequence 118, Appl
2	140	97.9	28	3	US-09-929-818-115	Sequence 115, Appl
3	139	97.2	28	3	US-09-929-818-117	Sequence 117, Appl
4	138	96.5	28	3	US-09-929-818-116	Sequence 116, Appl
5	137	95.8	28	3	US-09-929-818-1	Sequence 1, Appl
6	137	95.8	28	3	US-09-999-745-53	Sequence 53, Appl
7	137	95.8	28	3	US-09-554-000-37	Sequence 37, Appl
8	137	95.8	28	4	US-10-090-109A-1	Sequence 1, Appl
9	137	95.8	28	4	US-10-044-722-8	Sequence 8, Appl
10	137	95.8	28	4	US-10-004-530A-17	Sequence 17, Appl
11	137	95.8	28	4	US-10-114-716A-3	Sequence 3, Appl
12	137	95.8	28	4	US-10-211-994-1	Sequence 1, Appl
13	137	95.8	28	4	US-10-197-954-145	Sequence 145, Appl
14	137	95.8	28	4	US-10-100-256B-1	Sequence 1, Appl
15	137	95.8	28	4	US-10-254-569A-1	Sequence 1, Appl
16	137	95.8	28	4	US-10-201-288-31	Sequence 31, Appl
17	137	95.8	28	4	US-10-343-654-22	Sequence 22, Appl
18	137	95.8	28	4	US-10-416-822-1	Sequence 1, Appl
19	137	95.8	28	4	US-10-467-059-14	Sequence 14, Appl
20	137	95.8	28	5	US-10-494-634-7	Sequence 7, Appl
21	137	95.8	28	5	US-10-718-071-36	Sequence 36, Appl
22	137	95.8	28	5	US-10-788-563-17	Sequence 17, Appl
23	137	95.8	28	5	US-10-760-085-145	Sequence 145, Appl
24	137	95.8	28	5	US-10-892-981A-1	Sequence 1, Appl
25	137	95.8	28	5	US-10-769-803-2	Sequence 2, Appl
26	137	95.8	28	5	US-10-919-325-32	Sequence 32, Appl
27	137	95.8	28	5	US-10-898-143-1	Sequence 1, Appl

28	137	95.8	28	5	US-10-930-548-3	Sequence 3, Appli
29	137	95.8	28	5	US-10-770-712-56	Sequence 56, Appl
30	137	95.8	28	5	US-10-799-897A-1	Sequence 1, Appl
31	137	95.8	28	6	US-11-066-697-454	Sequence 454, App
32	137	95.8	28	6	US-11-066-697-455	Sequence 455, App
33	137	95.8	29	4	US-10-131-543-11	Sequence 11, Appl
34	137	95.8	29	4	US-10-131-546-11	Sequence 11, Appl
35	137	95.8	29	4	US-10-131-546-11	Sequence 11, Appl
36	137	95.8	29	4	US-10-131-346-11	Sequence 11, Appl
37	137	95.8	29	6	US-10-415-024-11	Sequence 11, Appl
38	137	95.8	29	6	US-11-088-596-11	Sequence 11, Appl
39	137	95.8	30	3	US-11-086-965-11	Sequence 11, Appl
40	137	95.8	30	3	US-09-928-818-203	Sequence 203, App
41	137	95.8	30	3	US-09-928-818-204	Sequence 204, App
42	137	95.8	30	3	US-09-928-818-205	Sequence 205, App
43	137	95.8	31	4	US-10-131-543-9	Sequence 9, Appl
44	137	95.8	31	4	US-10-131-543-10	Sequence 10, Appl
45	137	95.8	31	4	US-10-131-543-16	Sequence 16, Appl
46	137	95.8	31	4	US-10-131-546-9	Sequence 9, Appl

ALIGNMENTS

RESULT 1

```

US-09-929-818-118
; Sequence 118, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEX
; TITLE OF INVENTION: AGENTS, PARTICULARLY
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 118
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artifici
; OTHER INFORMATION: analog
; US-09-929-818-118

```

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Query Match      100.0%; Score 143; DB 3; Length 28;
Best Local Similarity 100.0%; Pred. No. 3.9e-13;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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Qy

1 HSDAVFTDNYRRLRKQMAVKYILN 28
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

Dp

1 HSDAVFTDNYRRLRKQMAVKYILN 28
| | | | | | | | | | | | | | | |

RESULT 2

US-09-929-818-115
; Sequence 115, Application US/0929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE

```

; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 115
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-115

Query Match          97.9%; Score 140; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1e-12;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 3
US-09-929-818-117
; Sequence 117, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 117
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-117

Query Match          97.2%; Score 139; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.4e-12;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 4
US-09-929-818-116
; Sequence 116, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 116
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-116

Query Match          96.5%; Score 138; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 5
US-09-929-818-1
; Sequence 1, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-929-818-1

Query Match          95.8%; Score 137; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28

RESULT 6

US-09-999-745-53
; Sequence 53, Application US/09999745
; Patent No. US20020157120A1

; GENERAL INFORMATION:

; APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

; APPLICANT: Tsien, Roger Y.

; APPLICANT: Baird, Geoffrey

; TITLE OF INVENTION: CIRCULARLY PERMUTED FLUORESCENT PROTEIN INDICATORS

; FILE REFERENCE: REGEN1470-1

; CURRENT APPLICATION NUMBER: US/09/999,745

; CURRENT FILING DATE: 2001-10-23

; PRIOR APPLICATION NUMBER: 09/316,920

; PRIOR FILING DATE: 1999-05-21

; NUMBER OF SEQ ID NOS: 67

; SOFTWARE: PatentIn version 3.0

; SEQ ID NO 53

; LENGTH: 28

; TYPE: PRT

; ORGANISM: Homo sapiens

US-09-999-745-53

Query Match 95.8%; Score 137; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28

RESULT 7

US-09-554-000-37

; Sequence 37, Application US/09554000

; Patent No. US20020165364A1

; GENERAL INFORMATION:

; APPLICANT: Tsien, Roger Y.

; APPLICANT: Miyawaki, Atsushi

; TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR

; FILE REFERENCE: 07257/042001

; CURRENT APPLICATION NUMBER: US/09/554,000

; CURRENT FILING DATE: 2000-04-20

; PRIOR APPLICATION NUMBER: 08/818,252

; PRIOR FILING DATE: 1997-03-14

; NUMBER OF SEQ ID NOS: 56

; SOFTWARE: FastSeq for Windows Version 4.0

; SEQ ID NO 37

; LENGTH: 28

; TYPE: PRT

; ORGANISM: Homo sapiens

US-09-554-000-37

Query Match 95.8%; Score 137; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28

RESULT 8

US-10-090-109A-1

; Sequence 1, Application US/10090109A

; Publication No. US20020151458A1

; GENERAL INFORMATION:

; APPLICANT: Perez Gomariz, et al
; TITLE OF INVENTION: Method For Treating and Preventing Septic Shock with
; FILE REFERENCE: VPAC1R, VPAC2R, and PAC1R Agonists
; CURRENT APPLICATION NUMBER: US/10/090,109A

; CURRENT FILING DATE: 2002-06-17

; PRIOR APPLICATION NUMBER: US 09/446,352

; PRIOR FILING DATE: 2000-12-17

; NUMBER OF SEQ ID NOS: 3

; SEQ ID NO 1

; LENGTH: 28

; TYPE: PRT

; ORGANISM: unknown

; FEATURE:

; OTHER INFORMATION: Isolated from small intestines and brains of pigs
US-10-090-109A-1

Query Match 95.8%; Score 137; DB 4; Length 28;

Best Local Similarity 96.4%; Pred. No. 2.8e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||

Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28
|||||

RESULT 9

US-10-044-722-8

; Sequence 8, Application US/10044722

; Publication No. US20020182729A1

; GENERAL INFORMATION:

; APPLICANT: DiCICCO-BLOOM, Emanuel

; APPLICANT: NICOT, Arnaud

; APPLICANT: LU, Nairu

; APPLICANT: SUH, Junghyup

; TITLE OF INVENTION: Pituitary adenylate cyclase-activating polypeptide (PACAP) is an

; FILE REFERENCE: 270/175

; CURRENT APPLICATION NUMBER: US/10/044,722

; CURRENT FILING DATE: 2002-01-11

; NUMBER OF SEQ ID NOS: 8

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 8

; LENGTH: 28

; TYPE: PRT

; ORGANISM: Homo sapiens

US-10-044-722-8

Query Match 95.8%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||

Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28
|||||

RESULT 10

US-10-004-530A-17

; Sequence 17, Application US/10004530A

; Publication No. US20030050436A1

; GENERAL INFORMATION:

; APPLICANT: Coy, David H.

; APPLICANT: Moreau, Jacques-Pierre

; APPLICANT: Kim, Sun H.

; TITLE OF INVENTION: OCTAPEPTIDE BOMBESIN ANALOGS

; FILE REFERENCE: 00537-00900K

; CURRENT APPLICATION NUMBER: US/10/004,530A

; CURRENT FILING DATE: 2002-08-09

; PRIOR APPLICATION NUMBER: 09/260,846

; PRIOR FILING DATE: 1999-03-02

; PRIOR APPLICATION NUMBER: 08/337,127

; PRIOR FILING DATE: 1994-11-10

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; PRIOR APPLICATION NUMBER: 07/779,039
; PRIOR FILING DATE: 1991-10-18
; PRIOR APPLICATION NUMBER: 07/502,438
; PRIOR FILING DATE: 1990-03-30
; PRIOR APPLICATION NUMBER: 07/397,169
; PRIOR FILING DATE: 1989-08-21
; PRIOR APPLICATION NUMBER: 07/376,555
; PRIOR FILING DATE: 1989-07-07
; PRIOR APPLICATION NUMBER: 07/317,941
; PRIOR FILING DATE: 1989-03-02
; PRIOR APPLICATION NUMBER: 07/282,328
; PRIOR FILING DATE: 1988-12-09
; PRIOR APPLICATION NUMBER: 07/257,998
; PRIOR FILING DATE: 1988-10-14
; PRIOR APPLICATION NUMBER: 07/248,771
; PRIOR FILING DATE: 1988-09-23
; Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-004-530A-17
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Query Match          95.8%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
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DB 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28
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RESULT 11
US-10-114-716A-3
; Sequence 3, Application US/10114716A
; Publication No. US20030078203A1
; GENERAL INFORMATION:
; APPLICANT: Sudhir Paul
; APPLICANT: Yasuhiro Nishiyama
; TITLE OF INVENTION: Covalently Reactive Transition State
; FILE REFERENCE: UTH001HB
; CURRENT APPLICATION NUMBER: US/10/114,716A
; PRIOR FILING DATE: 2002-04-01
; PRIOR APPLICATION NUMBER: 09/862,849
; PRIOR FILING DATE: 2001-05-22
; PRIOR APPLICATION NUMBER: 09/046,373
; PRIOR FILING DATE: 1998-03-23
; PRIOR APPLICATION NUMBER: 60/280,624
; PRIOR FILING DATE: 2001-03-31
; NUMBER OF SEQ ID NOS: 57
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Vasoactive intestinal peptide
US-10-114-716A-3
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Query Match          95.8%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | | | |
DB 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28
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RESULT 12
US-10-211-994-1
; Sequence 1, Application US/10211994
; Publication No. US20030082201A1
```

```
; GENERAL INFORMATION:
; APPLICANT: Rao, M.R.S.
; APPLICANT: Sengupta, Paromita
; APPLICANT: Prasad, Sudhanand
; APPLICANT: Burman, Anand C.
; APPLICANT: Mukherjee, Rama
; APPLICANT: Thomas, Becky
; TITLE OF INVENTION: MULTIVALENT SYNTHETIC VACCINE FOR CANCER
; FILE REFERENCE: U014152-1
; CURRENT APPLICATION NUMBER: US/10/211,994
; PRIOR FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: 60/309,975
; PRIOR FILING DATE: 2001-08-03
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-211-994-1
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Query Match          95.8%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | | | |
DB 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28
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RESULT 13
US-10-197-954-145
; Sequence 145, Application US/10197954
; Publication No. US20030119021A1
; GENERAL INFORMATION:
; APPLICANT: K"ster, Hubert
; APPLICANT: Siddiqi, Suhaib
; APPLICANT: Little, Daniel
; TITLE OF INVENTION: Capture Compounds, Collections Thereof
; TITLE OF INVENTION: And Methods For Analyzing The Proteome And Complex
; TITLE OF INVENTION: Compositions
; FILE REFERENCE: 24743-2305
; CURRENT APPLICATION NUMBER: US/10/197,954
; PRIOR FILING DATE: 2002-07-16
; PRIOR APPLICATION NUMBER: 60/306,019
; PRIOR FILING DATE: 2001-07-16
; PRIOR APPLICATION NUMBER: 60/314,123
; PRIOR FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 60/363,433
; PRIOR FILING DATE: 2002-03-11
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 145
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-197-954-145
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Query Match          95.8%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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```
QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | | | |
DB 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28
```

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RESULT 14
US-10-100-256B-1
; Sequence 1, Application US/10100256B
; Publication No. US20030152511A1
; GENERAL INFORMATION:
; APPLICANT: Thakur, Madhukar
```

; TITLE OF INVENTION: RADIOLABELED VASOACTIVE INTESTINAL
; TITLE OF INVENTION: PEPTIDE ANALOGS FOR IMAGING AND THERAPY
; FILE REFERENCE: 8321-104-D11
; CURRENT APPLICATION NUMBER: US/10/100,256B
; PRIOR FILING DATE: 2002-03-15
; PRIOR APPLICATION NUMBER: US 09/333,842
; PRIOR FILING DATE: 1999-06-15
; PRIOR APPLICATION NUMBER: US 60/089,364
; PRIOR FILING DATE: 1998-06-15
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-100-256B-1

Query Match 95.8%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 15

US-10-254-569A-1
; Sequence 1, Application US/10254569A
; Publication No. US20030158110A1
; GENERAL INFORMATION:
; APPLICANT: BURMAN C, ANAND
; APPLICANT: PRASAD, SUDHANAND
; APPLICANT: MUKHERJEE, RAMA
; APPLICANT: SINGH T, ANU
; APPLICANT: MATHUR, ARCHNA
; APPLICANT: GUPTA, NEENA
; TITLE OF INVENTION: VASOACTIVE INTESTINAL PEPTIDES ANALOGS
; FILE REFERENCE: 014071-1
; CURRENT APPLICATION NUMBER: US/10/254,569A
; CURRENT FILING DATE: 2002-12-05
; PRIOR APPLICATION NUMBER: 136/DEL/2000
; PRIOR FILING DATE: 2000-02-18
; PRIOR APPLICATION NUMBER: 09/630,335
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn ver. 2.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-254-569A-1

Query Match 95.8%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:31:04
Job time : 53.625 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 15:08:34 ; Search time 3.5 Seconds
(without alignments)
86.633 Million cell updates/sec

Title: US-10-626-719-7

Perfect score: 143

Sequence: 1 HSDAVFTDNYRLRKQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 75621 seqs, 10829074 residues

Total number of hits satisfying chosen parameters: 75621

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA New:*
1: /cgn2_6/ptodata/2/pubaa/US08_NEW_PUB.pep.*
2: /cgn2_6/ptodata/2/pubaa/US06_NEW_PUB.pep.*
3: /cgn2_6/ptodata/2/pubaa/US07_NEW_PUB.pep.*
4: /cgn2_6/ptodata/2/pubaa/PCT_NEW_PUB.pep.*
5: /cgn2_6/ptodata/2/pubaa/US05_NEW_PUB.pep.*
6: /cgn2_6/ptodata/2/pubaa/US10_NEW_PUB.pep.*
7: /cgn2_6/ptodata/2/pubaa/US11_NEW_PUB.pep.*
8: /cgn2_6/ptodata/2/pubaa/US60_NEW_PUB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	137	95.8	28	7	US-11-175-690-352
2	137	95.8	28	7	US-11-175-690-353
3	137	95.8	637	7	US-11-175-690-265
4	137	95.8	637	7	US-11-175-690-266
5	105	73.4	636	7	US-11-175-690-240
6	104	72.7	27	7	US-11-175-690-326
7	104	72.7	27	7	US-11-175-690-327
8	104	72.7	38	7	US-11-175-690-328
9	104	72.7	38	7	US-11-175-690-329
10	104	72.7	636	7	US-11-175-690-239
11	104	72.7	647	7	US-11-175-690-241
12	104	72.7	647	7	US-11-175-690-242
13	73	51.0	636	7	US-11-175-690-278
14	72	50.3	27	7	US-11-175-690-364
15	72	50.3	27	7	US-11-175-690-365
16	72	50.3	636	7	US-11-175-690-277
17	66	46.2	30	7	US-11-112-277-2
18	65	45.5	30	7	US-11-112-277-29
19	65	45.5	49	6	US-10-997-081A-26
20	65	45.5	49	6	US-10-997-081A-27
21	65	45.5	49	6	US-10-997-081A-28
22	65	45.5	49	6	US-10-997-081A-29
23	65	45.5	49	6	US-10-997-081A-30
24	65	45.5	49	6	US-10-997-081A-31
25	65	45.5	49	6	US-10-997-081A-32

26	65	45.5	49	6	US-10-997-081A-35
27	65	45.5	95	6	US-10-997-081A-25
28	65	45.5	97	6	US-10-997-081A-11
29	65	45.5	97	6	US-10-997-081A-18
30	65	45.5	97	6	US-10-997-081A-19
31	65	45.5	97	6	US-10-997-081A-20
32	65	45.5	97	6	US-10-997-081A-21
33	65	45.5	97	6	US-10-997-081A-22
34	65	45.5	97	6	US-10-997-081A-23
35	65	45.5	97	6	US-10-997-081A-40
36	65	45.5	97	6	US-10-997-081A-41
37	65	45.5	105	6	US-10-997-081A-10
38	64	44.8	30	7	US-11-112-277-31
39	63	44.1	30	7	US-11-112-277-30
40	49	34.3	636	7	US-11-175-690-268
41	48	33.6	27	7	US-11-175-690-354
42	48	33.6	27	7	US-11-175-690-355
43	48	33.6	636	7	US-11-175-690-267
44	44.5	31.1	159	6	US-10-467-657-5114
45	44.5	31.1	162	6	US-10-821-234-1621

ALIGNMENTS

RESULT 1

US-11-175-690-352
; Sequence 352, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 352
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-352

Query Match 95.8%; Score 137; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.5e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Oy 1 HSDAVFTDNYRLRKQMAVKYLSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKYLSILN 28

RESULT 2

US-11-175-690-353
; Sequence 353, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:

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; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 353
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match          95.8%; Score 137; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.5e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
    |||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
    |||||

RESULT 3
US-11-175-690-265
; Sequence 265, Application US/11/175,690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match          95.8%; Score 137; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 1.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
    |||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
    |||||

RESULT 4
US-11-175-690-266
; Sequence 266, Application US/11/175,690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 266
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-266

Query Match          95.8%; Score 137; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 1.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
    |||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
    |||||

RESULT 5
US-11-175-690-240
; Sequence 240, Application US/11/175,690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 240
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-240
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; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patent in Ver. 2.0
; SEQ ID NO 240
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-240

Query Match 73.4%; Score 105; DB 7; Length 636;
Best Local Similarity 67.9%; Pred. No. 5.6e-08;
Matches 19; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRRLRKQMAVKKYLNSIL 28
|||:||||:|||||||:|:
Db 25 HSDGIFTDSYRKRQMAVKKYLAAVL 52

RESULT 6

US-11-175-690-326
; Sequence 326, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patent in Ver. 2.0
; SEQ ID NO 326
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-326

Query Match 72.7%; Score 104; DB 7; Length 27;
Best Local Similarity 70.4%; Pred. No. 2.2e-09;
Matches 19; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRRLRKQMAVKKYLNSIL 27
|||:||||:|||||||:|:
Db 1 HSDGIFTDSYRKRQMAVKKYLAAVL 27

RESULT 7

US-11-175-690-327
; Sequence 327, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690

; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patent in Ver. 2.0
; SEQ ID NO 327
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-327

Query Match 72.7%; Score 104; DB 7; Length 27;
Best Local Similarity 70.4%; Pred. No. 2.2e-09;
Matches 19; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRRLRKQMAVKKYLNSIL 27
|||:||||:|||||||:|:
Db 1 HSDGIFTDSYRKRQMAVKKYLAAVL 27

RESULT 8

US-11-175-690-328
; Sequence 328, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patent in Ver. 2.0
; SEQ ID NO 328
; LENGTH: 38
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-328

Query Match 72.7%; Score 104; DB 7; Length 38;
Best Local Similarity 70.4%; Pred. No. 3.2e-09;
Matches 19; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRRLRKQMAVKKYLNSIL 27

; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patent in Ver. 2.0
; SEQ ID NO 242
; LENGTH: 647
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-242

Query Match 72.7%; Score 104; DB 7; Length 647;
Best Local Similarity 70.4%; Pred. No. 8e-08;
Matches 19; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSIL 27
|||:||||:|||||||:|
Db 25 HSDGIFTDSYRKQMAVKKYLAAVL 51

RESULT 13
US-11-175-690-278
; Sequence 278, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patent in Ver. 2.0
; SEQ ID NO 278
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-278

Query Match 51.0%; Score 73; DB 7; Length 636;
Best Local Similarity 42.9%; Pred. No. 0.0026;
Matches 12; Conservative 9; Mismatches 7; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSIL 28
|:| ||| :|:| ||| :|:|
Db 25 HADGVFTSDFSKLLGQLSAKKYLESLMD 52

RESULT 14
US-11-175-690-364
; Sequence 364, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patent in Ver. 2.0
; SEQ ID NO 364
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-364

Query Match 50.3%; Score 72; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 0.0001;
Matches 12; Conservative 8; Mismatches 7; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSIL 27
|:| ||| :|:| ||| :|:|
Db 1 HADGVFTSDFSKLLGQLSAKKYLESLM 27

RESULT 15
US-11-175-690-365
; Sequence 365, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patent in Ver. 2.0
; SEQ ID NO 365
; LENGTH: 27

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; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-365

Query Match      50.3%; Score 72; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 0.0001;
Matches 12; Conservative 8; Mismatches 7; Indels 0; Gaps 0;

QY      1 HSDAVFTDNVRRLRKQMAVKKYLNSIL 27
  | | | | | : | : | : | : | : | : | :
Db      1 HADGVFTSDFSKLLQLSAAKKYLESLM 27

Search completed: January 25, 2006, 15:31:43
Job time : 3.5 secs
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:55:03 ; Search time 13.25 Seconds
(without alignments)
203.326 Million cell updates/sec

Title: US-10-626-719-7
Perfect score: 143
Sequence: 1 HSDAVFTDNYRRLKQMAVKYKLYNSILN 28

Scoring table:
BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues
Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR 80.*
1: pir1.*
2: pir2.*
3: pir3.*
4: pir4.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	137	95.8	28	B60071	vasoactive intesti
2	137	95.8	28	A60304	vasoactive intesti
3	137	95.8	55	VRBO	vasoactive intesti
4	137	95.8	55	VRRB	vasoactive intesti
5	137	95.8	55	VRSH	vasoactive intesti
6	137	95.8	58	VRPG	vasoactive intesti
7	137	95.8	145	A60038	vasoactive intesti
8	137	95.8	170	VRHU	vasoactive intesti
9	137	95.8	170	VRRT	vasoactive intesti
10	137	95.8	170	A60037	vasoactive intesti
11	126	88.1	165	VRCH	vasoactive intesti
12	125	87.4	28	A60303	vasoactive intesti
13	124	86.7	55	VRGP	vasoactive intesti
14	115	80.4	25	J00361	vasoactive intesti
15	114	79.7	28	A38232	vasoactive intesti
16	104	72.7	27	A61071	pituitary adenylat
17	104	72.7	38	A49165	pituitary adenylat
18	104	72.7	173	S34767	neuropeptides prec
19	104	72.7	175	A37786	pituitary adenylat
20	104	72.7	176	I84638	pituitary adenylat
21	104	72.7	176	A34044	pituitary adenylat
22	104	72.7	195	I50456	pituitary adenylat
23	98	68.5	38	A61070	pituitary adenylat
24	80	55.9	35	HWGHD	exendin-1 - Mexica
25	77	53.8	38	HWGHS	exendin-2 - Gila m
26	77	53.8	104	A32731	somatoliberin prec
27	76	53.1	103	A14110	somatoliberin prec
28	70	49.0	44	RHOS	somatoliberin - bo
29	65	45.5	44	RHPS	somatoliberin - pi

30 65 45.5 108 1 RHHUS
31 61 42.7 27 1 SECH
32 56 39.2 168 2 F90095
33 56 39.2 206 2 I51301
34 52 36.4 11 2 A32428
35 52 36.4 443 2 C70392
36 52 36.4 532 2 B82354
37 51 35.7 485 2 A22372
38 50 35.0 27 2 A27267
39 49.5 34.6 266 2 E71612
40 49 34.3 237 2 A55218
41 49 34.3 418 2 A97300
42 48.5 33.9 67 2 T07364
43 48.5 33.9 269 1 A27067
44 48 33.6 27 1 S07443
45 48 33.6 27 1 SEBO

sonatoliberin prec
secretin - chicken
hypothetical prote
proglucagon - chic
amine oxidase (cop
gamma-glutamyl pho
deoxycytidylate de
hypothetical prote
secretin - dog
ribosomal protein
sfp homolog gsp -
gamma-glutamyl pho
trans-cinnamate 4--
calretinin - chick
secretin - human
secretin - bovine

ALIGNMENTS

RESULT 1

B60071
vasoactive intestinal peptide - rhesus macaque
C:Species: Macaca mulatta (rhesus macaque)
C:Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 20-Mar-1998
C:Accession: B60071
R:Yu, J.; Xin, Y.; Eng, J.; Yalow, R.S.
Regul. Pept. 32, 39-45, 1991
A:Title: Rhesus monkey gastroenteropancreatic hormones: relationship to human sequences.
A:Reference number: A60071; MUID:91164506; PMID:2003150
A:Accession: B60071
A:Status: protein sequence not shown
A:Molecule type: protein
A:Residues: 1-28 <YUA>
A:Cross-references: UNIPARC:UPI000002D1C0
A:Note: the sequence is identical with the human sequence
C:Superfamily: glucagon
C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 95.8%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRRLKQMAVKYKLYNSILN 28
|||||
Db 1 HSDAVFTDNYRRLKQMAVKYKLYNSILN 28
|||||

RESULT 2

A60304
vasoactive intestinal peptide - dog
N:Alternate names: Vip
C:Species: Canis lupus familiaris (dog)
C:Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change 09-Jul-2004
C:Accession: A60304
R:Eng, J.; Pan, Y.C.E.; Raufman, J.P.; Yalow, R.S.
Regul. Pept. Suppl. 3, S14, 1985
A:Title: Purification and sequencing of dog and guinea pig VIP's.
A:Reference number: A60304
A:Accession: A60304
A:Molecule type: protein
A:Residues: 1-28 <ENG>
A:Cross-references: UNIPROT:P04565; UNIPARC:UPI000002D1C0
C:Superfamily: glucagon
C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 95.8%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRRLKQMAVKYKLYNSILN 28
|||||

Db 1 HSDAVFTDNYRLRKQMAVKYKYLNSILN 28

RESULT 3

VRBO
vasoactive intestinal peptide precursor - bovine (fragments)
N/Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C/Species: Bos primigenius taurus (cattle)
C/Date: 26-Apr-1996 #sequence revision 03-May-1996 #text_change 07-May-1999
C/Accession: A61643; A61644; S09689
R/Carlskist, M.; Kaiser, K.; Tatemoto, K.; Joernvall, H.; Mutt, V.
Eur. J. Biochem. 144, 243-247, 1984
A/Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper in
A/Reference number: A61643; MUID:85027215; PMID:654846
A/Accession: A61643
A/Molecule type: protein
A/Residues: 1-27 <CR>
A/Cross-references: UNIPARC:UPI0000173515
R/Carlskist, M.; Mutt, V.; Joernvall, H.
FEBS Lett. 108, 457-460, 1979
A/Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).
A/Reference number: A61644; MUID:80092152; PMID:520589
A/Accession: A61644
A/Molecule type: protein
A/Residues: 28-55 <CA2>
A/Cross-references: UNIPARC:UPI000002D1C0
R/Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht,
Biochim. Biophys. Acta 1038, 355-359, 1990
A/Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A/Reference number: S09688; MUID:90254163; PMID:2340294
A/Contents: annotation; comparison of mammalian PHI sequences
C/Superfamily: glucagon
C/Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
F:1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F:55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.8%; Score 137; DB 1; Length 55;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRKQMAVKYKYLNSILN 28

Db 28 HSDAVFTDNYRLRKQMAVKYKYLNSILN 55

RESULT 4

VRBB
vasoactive intestinal peptide precursor - rabbit (fragments)
N/Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C/Species: Oryctolagus cuniculus (domestic rabbit)
C/Date: 03-Feb-1993 #sequence_revision 19-Apr-1996 #text_change 20-Mar-1998
C/Accession: B60415; A60415
R/Gossen, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht,
Peptides 11, 123-128, 1990
A/Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.
A/Reference number: A60415; MUID:90259845; PMID:2342988
A/Accession: B60415
A/Molecule type: protein
A/Residues: 1-27 <GOS>
A/Cross-references: UNIPARC:UPI00000351DB
A/Accession: A60415
A/Molecule type: protein
A/Residues: 28-55 <GOS>
A/Cross-references: UNIPARC:UPI00000351DB
C/Superfamily: Glucagon
C/Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
F:1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F:55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

QY 1 HSDAVFTDNYRLRKQMAVKYKYLNSILN 28

Db 28 HSDAVFTDNYRLRKQMAVKYKYLNSILN 55

Query Match 95.8%; Score 137; DB 1; Length 55;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRKQMAVKYKYLNSILN 28

Db 28 HSDAVFTDNYRLRKQMAVKYKYLNSILN 55

RESULT 5

VRSH

vasoactive intestinal peptide precursor - sheep (fragments)
N/Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C/Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C/Date: 31-Mar-1993 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
C/Accession: B60072; A60072; C61063; A43974
R/Bounjoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.
Regul. Pept. 32, 169-179, 1991
A/Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A/Reference number: A60072; MUID:91239834; PMID:2034821
A/Accession: B60072
A/Molecule type: protein
A/Residues: 1-27 <BOU>
A/Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515
A/Accession: A60072
A/Molecule type: protein
A/Residues: 28-55 <BO2>
A/Cross-references: UNIPARC:UPI000002D1C0
R/Miyata, A.; Jiang, L.; Stibbe, H.H.; Arimura, A.
Regul. Pept. 38, 145-154, 1992
A/Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreact
A/Reference number: A61063; MUID:92245116; PMID:1574609
A/Accession: C61063
A/Molecule type: protein
A/Residues: 28-55 <MIY>
A/Cross-references: UNIPARC:UPI000002D1C0
A/Experimental source: hypothalamus, intestine
R/Gafvelin, G.

Peptides 11, 703-706, 1990
A/Title: Isolation and primary structure of VIP from sheep brain.
A/Reference number: A43974; MUID:91045331; PMID:2235680
A/Accession: A43974

QY 1 HSDAVFTDNYRLRKQMAVKYKYLNSILN 28

Db 28 HSDAVFTDNYRLRKQMAVKYKYLNSILN 55

Query Match 95.8%; Score 137; DB 1; Length 55;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

RESULT 6

VRPG

vasoactive intestinal peptide precursor - pig (fragments)
N/Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C/Species: Sus scrofa domestica (domestic pig)
C/Date: 24-Apr-1984 #sequence_revision 05-Jan-1996 #text_change 09-Jul-2004
C/Accession: A01549; A60300; A01550; J00417; A56754; S09690
R/Tatemoto, K.; Mutt, V.
Proc. Natl. Acad. Sci. U.S.A. 78, 6603-6607, 1981
A/Title: Isolation and characterization of the intestinal peptide porcine PHI (PHI-27),
A/Reference number: A01549; MUID:82082498; PMID:6947244

R; Benson, D.L.; Isaacson, P.J.; Jones, E.G. Brain Res. Mol. Brain Res. 9, 169-174, 1991

A; Title: In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey A; Reference number: A60038; MUID: 91203476; PMID: 1850073

A; Accession: A60038

A; Status: not compared with conceptual translation

A; Molecule type: mRNA

A; Residues: 1-145 <BEN>

A; Cross-references: UNIPROT:Q7M2Y9; UNIPARC:UPI000017662C

C; Superfamily: glucagon

C; Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodilation

Query Match 95.8%; Score 137; DB 2; Length 145;

Best Local Similarity 96.4%; Pred. No. 2.8e-12;

Matches 27; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

Db 100 HSDAVFTDNYRLRKQMAVKKYLNSILN 127

RESULT 8

VRHU

vasoactive intestinal peptide precursor [validated] - human

N; Alternate names: VIP precursor

N; Contains: peptide histidine-methionine (PHM-27); peptide histidine-valine (PHV-42); vasoactive intestinal peptide (VIP)

C; Species: Homo sapiens (man)

C; Date: 14-Nov-1983 #sequence revision 14-Nov-1983 #text change 09-Jul-2004

C; Accession: A23296; A93313; A60205; A26361; A27419; JH0618; I51955; I56494; I56988; A01

R; Tsukada, T.; Horowitz, S.J.; Montminy, M.R.; Mandel, G.; Goodman, R.H.

DNA 4, 293-300, 1985

A; Title: Structure of the human vasoactive intestinal polypeptide gene.

A; Reference number: A90952; MUID: 86004065; PMID: 3899557

A; Accession: A23296

A; Molecule type: DNA

A; Residues: 1-170 <TSU>

A; Cross-references: UNIPROT:P01282; UNIPARC:UPI00003B343; GB:M11553; NID:G340243; PIDN:

A; Note: the authors translated the codon GAA for residue 48 as Gln

R; Itoh, N.; Obata, K.; Yanaihara, N.; Okamoto, H.

Nature 304, 547-549, 1983

A; Title: Human preprovasoactive intestinal polypeptide contains a novel PHI-27-like peptide

A; Reference number: A93313; MUID: 83271523; PMID: 6571696

A; Accession: A93313

A; Molecule type: mRNA

A; Residues: 1-170 <ITO>

A; Cross-references: UNIPARC:UPI000003B343; GB:L00157; GB:J00320; NID:G340277; PIDN:AAA61

R; Gozes, I.; Giladi, E.; Shani, Y.

J. Neurochem. 48, 1136-1141, 1987

A; Title: Vasoactive intestinal peptide gene: putative mechanism of information storage

A; Reference number: A60205; MUID: 87140054; PMID: 2434617

A; Accession: A60205

A; Molecule type: mRNA

A; Residues: 78-155 <GOZ>

A; Cross-references: UNIPARC:UPI000016B2F8; GB:M31645; GB:M32162; NID:G340250; PIDN:AAA61

A; Note: this abundant mRNA from a human buccal tumor line contains an unspliced intron

R; Linder, S.; Barkhem, T.; Norberg, A.; Persson, H.; Schalling, M.; Hokfelt, T.; Magnusson

Proc. Natl. Acad. Sci. U.S.A. 84, 605-609, 1987

A; Title: Structure and expression of the gene encoding the vasoactive intestinal peptide

A; Reference number: A26361; MUID: 87092456; PMID: 3025882

A; Accession: A26361

A; Molecule type: DNA

A; Residues: 1-115, 'L', 117-135, 'G', 137-170 <LIN>

A; Cross-references: UNIPARC:UPI000016B2FA; GB:M14623; NID:G340271; PIDN:AAA61288.1; PID:

A; Note: the authors translated the codon TTA for residue 116 as Ser and GGC for residue

R; Xiangou, Y.; Di Marzo, V.; Spokes, R.A.; Panico, M.; Morris, H.R.; Bloom, S.R.

J. Biol. Chem. 262, 14010-14013, 1987

A; Title: Isolation, characterization, and pharmacological actions of peptide histidine

A; Reference number: A27419; MUID: 88007645; PMID: 3654550

A; Accession: A27419

A; Molecule type: protein

A; Residues: 81-122 <YIA>

A; Cross-references: UNIPARC:UPI00000351DE

R; Kitamura, K.; Kanagawa, K.; Kawamoto, M.; Ichiki, Y.; Matsuo, H.; Eto, T.

Biochem. Biophys. Res. Commun. 185, 134-141, 1992
A>Title: Isolation and characterization of peptides which act on rat platelets, from a P
A/Reference number: JH0618; MUID:92287083; PMID:1318039
A/Accession: JH0618
A/Molecule type: protein
A/Residues: 125-152 <KIT>
A/Cross-references: UNIPARC:UPI000002D1C0
A/Experimental source: pheochromocytoma
R.Yanagami, T.; Ohawa, K.; Nishizawa, M.; Inoue, C.; Gotoh, E.; Yanaihara, N.; Yamamoto
Ann. N. Y. Acad. Sci. 527, 87-102, 1988
A>Title: Complete nucleotide sequence of human vasoactive intestinal peptide/PHM-27 gene
A/Reference number: I51955; MUID:88267775; PMID:2839091
A/Accession: I51955
A/Status: translated from GB/EMBL/DBJ
A/Molecule type: DNA
A/Residues: 1-170 <RES>
A/Cross-references: UNIPARC:UPI000003B343; GB:M33027; NID:G340253; PIDN:AAA69515.1; PID:
R.Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 47, 1136-1141, 1987
A>Title: Vasoactive intestinal peptide gene: Putative mechanism of information storage a
A/Reference number: I56494
A/Accession: I56494
A/Status: preliminary; translated from GB/EMBL/DBJ
A/Molecule type: DNA
A/Residues: 78-155 <RE2>
A/Cross-references: UNIPARC:UPI000016B2F8; GB:M32162; NID:G340250; PIDN:AAA61285.1; PID:
R.Bloom, S.R.; Christofides, N.D.; Delamarter, J.; Buell, G.; Kawashima, E.; Polak, J.M.
Lancet 2, 1163-1165, 1983
A>Title: Diarrhoea in vipoma patients associated with cosecretion of a second active pep
A/Reference number: I56988; MUID:84066682; PMID:6139527
A/Accession: I56988
A/Status: preliminary; translated from GB/EMBL/DBJ
A/Molecule type: mRNA
A/Residues: 50-170 <RE3>
A/Cross-references: UNIPARC:UPI000016B2F7; GB:M54930; NID:G340247; PIDN:AAA63268.1; PID:
C/Genetics:
A/Gene: GDB:VIP
A/Cross-references: GDB:120490; OMIM:192320
A/Map position: 6q26-6q27
A/Introns: 36/2; 77/2; 112/2; 156/2
A/Superfamily: glucagon
C/Keywords: amidated carboxyl end; duplication; glycoprotein; hormone; intestine; neurog
F;1-20/Domain: signal sequence #status predicted <SIG>
F;81-122/Product: peptide histidine-valine (PHV-42) #status experimental <PHV>
F;81-107/Product: peptide histidine-methionine (PHM-27) #status experimental <PHM>
F;125-152/Product: vasoactive intestinal peptide #status experimental <VIP>
F;68,133/Binding site: carboxylate (Asn) (covalent) #status predicted
F;107/Modified site: amidated carboxyl end (Met) (amide in mature form from following gl
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 95.8%; Score 137; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 3.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYRLRKQMAVKKYLNSILN 152
RESULT 9
VRRT
N/Contexts: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C/Species: Rattus norvegicus (Norway rat)
C/Date: 28-Feb-1986 #sequence revision 30-Jun-1993 #text change 09-Jul-2004
C/Accession: A60037; B60037; A01548; A28102; A60586; A60587; S09691
R.Giladi, E.; Shani, Y.; Gozes, I.
Brain Res. Mol. Brain Res. 7, 261-267, 1990
A>Title: The complete structure of the rat VIP gene.
A/Reference number: A60053; MUID:90244869; PMID:2159586
A/Accession: A60053
A/Molecule type: DNA
A/Residues: 1-170 <GIL>

A/Cross-references: UNIPROT:P01283; UNIPARC:UPI000013884A
A/Note: the authors translated the codon GAG for residue 67 as Gln
R.Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A>Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A/Reference number: A60037; MUID:91232388; PMID:1851524
A/Accession: B60037
A/Status: not compared with conceptual translation
A/Molecule type: DNA
A/Residues: 78-155 <IAM>
A/Cross-references: UNIPARC:UPI0000173511
R.Nishizawa, M.; Hayakawa, Y.; Yanaihara, N.; Okamoto, H.
FEBS Lett. 183, 55-59, 1985
A>Title: Nucleotide sequence divergence and functional constraint in VIP precursor mRNA
A/Reference number: A01548; MUID:85154612; PMID:3838518
A/Accession: A01548
A/Molecule type: mRNA
A/Residues: 9-170 <NIS>
A/Cross-references: UNIPARC:UPI0000170BA3; GB:X02341; NID:G57481; PIDN:CAA26200.1; PID:9
A/Experimental source: cerebral cortex
F.Goetzl, E.J.; Sreedharan, S.P.; Turck, C.W.
J. Biol. Chem. 263, 9083-9086, 1988
A>Title: Structurally distinctive vasoactive intestinal peptides from rat basophilic leu
A/Reference number: A28102; MUID:88243784; PMID:3379062
A/Accession: A28102
A/Molecule type: protein
A/Residues: 134-152 <GOE>
A/Cross-references: UNIPARC:UPI00000351E4
A/Note: the source of this novel short form of VIP was rat basophilic leukemia cells
R.Cauvin, A.; Vandermeers, A.; Vandermeers-Biret, M.C.; Rathe, J.; Robberecht, P.; Chris
Endocrinology 125, 1296-1302, 1989
A>Title: Peptide histidine isoleucineamide (PHI)-(1-27)-Gly as a new major form of PHI in
A/Reference number: A60586; MUID:89339237; PMID:2759027
A/Accession: A60586
A/Molecule type: protein
A/Residues: 81-108 <CAU>
A/Cross-references: UNIPARC:UPI0000173512
R.Cauvin, A.; Vandermeers, A.; Vandermeers-Biret, M.C.; Robberecht, P.; Christophe, J.
Endocrinology 125, 2645-2655, 1989
A>Title: Variable distribution of three molecular forms of peptide histidine isoleucineam
A/Reference number: A60587; MUID:90005222; PMID:2792003
A/Accession: A60587
A/Molecule type: protein
A/Residues: 81-122 <CA2>
A/Cross-references: UNIPARC:UPI0000173513
R.Buscali, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, P.
Biochim. Biophys. Acta 1038, 355-359, 1990
A>Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A/Reference number: S09688; MUID:90254163; PMID:2340294
A/Contents: annotation; comparison of mammalian PHI sequences
C/Comment: Two active peptides are released from the VIP precursor by cleavage at pair:
C/Genetics:
A/Introns: 36/2; 77/2; 156/2
A/Superfamily: glucagon
C/Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
F;1-21/Domain: signal sequence #status predicted <SIG>
F;81-122/Product: PHI-42 #status experimental <PH42>
F;81-108/Product: PHI-27-Gly #status experimental <PHIG>
F;81-107/Product: peptide histidine-isoleucine (PHI-27) #status predicted <PHI>
F;125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F;107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
F;133/Binding site: carboxylate (Asn) (covalent) #status predicted
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 95.8%; Score 137; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 3.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYRLRKQMAVKKYLNSILN 152

RESULT 10

A60037
vasoactive intestinal peptide precursor - mouse
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Mus musculus (house mouse)
C;Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C;Accession: A60037; 149386
R;Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A;Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A;Reference number: A60037; MUID:91232388; PMID:1851524
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 1-170 <LAM>
A;Cross-references: UNIPROT:P32648; UNIPARC:UPI000002171F
R;Sena, M.; Bravo, D.T.; Von Agoston, D.; Waschek, J.A.
DNA Seq. 5, 25-29, 1994
A;Title: High conservation of upstream regulatory sequences on the human and mouse vasoa
A;Reference number: 149386; MUID:95201289; PMID:7894056
A;Accession: 149386
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-35 <RES>
A;Cross-references: UNIPARC:UPI000016D189; EMBL:X74297; NID:G895871; PIDN:CAAS2350.1; PI
C;Comment: Two active peptides are released from the VIP precursor by cleavage at paired
C;Genetics:
A;Gene: VIP
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
F;1-21/Domain: signal sequence #status predicted <PHI>
F;81-107/Product: PHI-27 #status predicted <PHI>
F;125-152/Product: vasoactive intestinal peptide
F;107/Modified site: amidated carboxyl end (ile) (amide in mature form from following gl
F;133/Binding site: carbohydrate (asn) (covalent) #status predicted
F;152/Modified site: amidated carboxyl end (asn) (amide in mature form from following gl

Query Match 95.8%; Score 137; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 3.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRQMAVKYKLSILN 28
|||||
Db 125 HSDAVFTDNYRLRQMAVKYKLSILN 152

RESULT 11

VRCH
vasoactive intestinal peptide precursor - chicken
C;Species: Gallus gallus (chicken)
C;Date: 24-Apr-1984 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C;Accession: S47470; A91425; A90720; A01551
R;Talbot, R.T.; Dunn, I.C.; Wilson, P.W.; Sang, H.M.; Sharp, P.J.
submitted to the EMBL Data Library, August 1994
A;Description: Evidence for alternative splicing of the chicken VIP gene.
A;Reference number: S47470
A;Accession: S47470
A;Molecule type: mRNA
A;Residues: 1-165 <TAL>
A;Cross-references: UNIPROT:P48143; UNIPARC:UPI000002B6C3; EMBL:X80906; NID:G531364; PID
R;Nilsson, A.
FEBS Lett. 60, 322-326, 1975
A;Title: Structure of the vasoactive intestinal octacosapeptide from chicken intestine.
A;Reference number: A91425; MUID:76210823; PMID:1227973
A;Accession: A91425
A;Molecule type: protein
A;Residues: 94-121 <NIL>
A;Cross-references: UNIPARC:UPI00000351E1
R;Bodanszky, M.; Lin, C.Y.; Viotakis, A.E.; Mutt, V.; Said, S.I.
Bioorg. Chem. 5, 339-350, 1976
A;Title: Vasoactive intestinal peptide (VIP) from chicken. Synthesis and properties of b
A;Reference number: A90720
A;Contents: synthesis

A;Accession: A90720

A;Molecule type: protein

A;Residues: 107-121 <BOD>

A;Cross-references: UNIPARC:UPI00000173517

C;Superfamily: glucagon

C;Keywords: amidated carboxyl end; duplication; hormone; neuropeptide

F;1-25/Domain: signal sequence #status predicted <SIG>

F;94-121/Product: vasoactive intestinal peptide #status experimental <MAT>

F;121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following gl

Query Match 88.1%; Score 126; DB 1; Length 165;

Best Local Similarity 88.9%; Pred. No. 1.2e-10;

Matches 24; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRQMAVKYKLSIL 27

|||||

Db 94 HSDAVFTDNYSRFRQMAVKYKLSVL 120

RESULT 12

A60303

vasoactive intestinal peptide - smaller spotted catshark

C;Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish)

C;Date: 10-Nov-1992 #sequence_revision 10-Nov-1992 #text_change 09-Jul-2004

C;Accession: A60303; A60314; S07432

R;Dimalline, R.; Thwaites, D.T.; Young, J.; Lee, C.M.; Thorndyke, M.C.

Regul. Pept. 18, 356, 1987

A;Title: A novel family of VIP-like peptides from the dogfish Scyliorhinus canicula.

A;Reference number: A60303

A;Accession: A60303

A;Molecule type: protein

A;Residues: 1-28 <DIM>

A;Cross-references: UNIPROT:P09685; UNIPARC:UPI000013884B

A;Note: this reference is an abstract

R;Dimalline, R.; Thorndyke, M.C.; Young, J.

Regul. Pept. 14, 1-10, 1986

A;Title: Isolation and partial sequence of elasmobranch VIP.

A;Reference number: A60314; MUID:86234323; PMID:3715063

A;Accession: A60314

A;Molecule type: protein

A;Residues: 1-10 <DI2>

A;Cross-references: UNIPARC:UPI000017662D

R;Dimalline, R.; Young, J.; Thwaites, D.T.; Lee, C.M.; Thorndyke, M.C.

Ann. N. Y. Acad. Sci. 527, 621-623, 1988

A;Title: Amino acid sequence of a biologically active vasoactive intestinal peptide from

A;Reference number: S07432

A;Accession: S07432

A;Status: preliminary

A;Molecule type: protein

A;Residues: 1-28 <DI3>

A;Cross-references: UNIPARC:UPI000013884B

C;Superfamily: glucagon

C;Keywords: amidated carboxyl end; duplication; intestine; neuropeptide

F;28/Modified site: amidated carboxyl end (Ala) #status experimental

Query Match 87.4%; Score 125; DB 2; Length 28;

Best Local Similarity 85.2%; Pred. No. 2.8e-11;

Matches 23; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRQMAVKYKLSIL 27

|||||

Db 1 HSDAVFTDNYSRIRKQMAVKYKLSLL 27

RESULT 13

VRGP

vasoactive intestinal peptide precursor - guinea pig (fragments)

N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)

C;Species: Cavia porcellus (guinea pig)

C;Date: 31-Mar-1988 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004

C;Accession: A26175; S09688; A57082; B60304

R;Du, B.H.; Eng, J.; Hulmes, J.D.; Chang, M.; Pan, Y.C.E.; Yalow, R.S.

Biochem. Biophys. Res. Commun. 128, 1093-1098, 1985

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A:Molecule type: protein
A:Residues: 1-28 <ENG>
A:CROSS-references: UNIPROT:P9089, UNIPARC:UPI0000138846
A>Note: sequence extracted from NCBI backbone (NCBIP:87215)
C:Superfamily: Glucagon
C:Keywords: duplication; intestine; neuropeptide

Query Match      79.7%; Score 114; DB 2; Length 28;
Best Local Similarity 78.6%; Pred. No. 1e-09;
Matches 22, Conservative 4; Mismatches 2; Indels 0; Gaps 0;
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Qy 1 HSDAVFTDNYRRLRKQMAVKYKLSILN 28
    |||||:::|||:::|||::|||
Db 1 HSDAVFTDSYTRLKKQAMRYKLYDSILN 28
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Search completed: January 25, 2006, 15:20:38
Job time : 14.25 secs
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:54:02 ; Search time 76 Seconds
(without alignments)
259.931 Million cell updates/sec

Title: US-10-626-719-7

Perfect score: 143

Sequence: 1 HSDAVFTDNYRLRKQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : UniProt_05.80.*

1: uniprot_sprot.*

2: uniprot_trenbl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	137	95.8	28	1 VIP_CANFA	P63289 canis faml
2	137	95.8	28	1 VIP_CAPHI	P63290 capra hircu
3	137	95.8	28	1 VIP_MACMU	P84488 macaca mula
4	137	95.8	28	1 VIP_SHEEP	P63291 ovis aries
5	137	95.8	72	1 VIP_PIG	P01284 sus scrofa
6	137	95.8	72	1 VIP_RABIT	P32649 oryctolagus
7	137	95.8	118	2 Q5TCY7 HUMAN	Q5tcy7 homo sapien
8	137	95.8	145	2 Q7M2Y9 MACFA	Q7m2y9 macaca fasc
9	137	95.8	153	2 Q7TSR4 9MURI	Q7tsr4 arvicanthis
10	137	95.8	169	2 Q5TCY8 HUMAN	Q5tcy8 homo sapien
11	137	95.8	170	1 VIP_BOVIN	P81401 bos taurus
12	137	95.8	170	1 VIP_HUMAN	P01282 homo sapien
13	137	95.8	170	1 VIP_MOUSE	P32648 mus musculus
14	137	95.8	170	1 VIP_RAT	P01283 rattus norv
15	137	95.8	170	2 Q5TCY9 HUMAN	Q5tcy9 homo sapien
16	137	95.8	171	2 Q9D2Z7 MOUSE	Q9d2z7 mus musculus
17	126	88.1	28	1 VIP_ALIMI	P48142 alligator m
18	126	88.1	28	1 VIP_RANRI	P81016 rana ridibu
19	126	88.1	70	2 Q4TX3 ANAPL	Q4tx3 anas platyr
20	126	88.1	86	2 Q4TZY9 9AVES	Q4tzy9 anser anser
21	126	88.1	200	1 VIP_CHICK	P48143 gallus gall
22	126	88.1	200	1 VIP_MELGA	P45644 meleagris g
23	126	88.1	202	2 Q7ZYG8 XENLA	Q7zyg8 xenopus lae
24	125	87.4	28	1 VIP_SCYCA	P09685 scyllorhinu
25	125	87.4	28	2 Q9PR19 AMICA	Q9pr19 amia calva
26	125	87.4	147	2 Q4SQN2 TETNG	Q4sqn2 tetraodon n
27	124	86.7	72	1 VIP_CAVPO	P04566 cavia porce
28	121	84.6	28	2 Q9P8N8 CARAU	Q9p8n8 carassius a
29	115	80.4	25	1 VIP_GADMO	P05684 gadus morhu
30	114	79.7	28	1 VIP_DIDMA	P39089 didelphis m
31	108	75.5	38	2 Q75W85 MISAN	Q75w85 misgurnus a

32	105	73.4	172	2	Q9DE29 BRARE	Q9de29 brachydanio
33	105	73.4	199	2	Q5XJ29 BRARE	Q5xj29 brachydanio
34	104	72.7	38	2	Q75W94 HALRO	Q75w94 halocynthia
35	104	72.7	38	2	Q8IU36 PERAM	Q8iu36 periplaneta
36	104	72.7	38	2	Q8IU37 SEPLE	Q8iu37 sepioteuthi
37	104	72.7	38	2	Q8IU38 HYDMA	Q8iu38 hydra magni
38	104	72.7	38	2	Q8IU39 DUGJA	Q8iu39 dugesia jap
39	104	72.7	38	2	Q75W87 ONCMY	Q75w87 oncorhynch
40	104	72.7	38	2	Q75W90 9TELE	Q75w90 sardinops m
41	104	72.7	38	2	Q75W92 9PERC	Q75w92 stephanolep
42	104	72.7	38	2	Q8AYP4 ACTSC	Q8ayp4 acipenser s
43	104	72.7	38	2	Q8AYP5 TRAJP	Q8ayp5 trachurus j
44	104	72.7	62	2	Q53B12 9PRIM	Q53b12 gorilla gor
45	104	72.7	62	2	Q53B13 PONPY	Q53b13 pongo pygma

ALIGNMENTS

RESULT 1						
VIP_CANFA						
ID	VIP_CANFA	STANDARD;	PRT;	28	AA.	
AC	P63289; P04565;					
DT	13-AUG-1987 (Rel. 05, Created)					
DT	13-AUG-1987 (Rel. 05, Last sequence update)					
DT	13-SEP-2005 (Rel. 48, Last annotation update)					
DE	Vasoactive intestinal peptide (VIP) (Vasoactive intestinal					
DE	polypeptide).					
CN	Name=VIP;					
OS	Canis familiaris (Dog).					
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;					
OC	Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;					
OC	Canis.					
OX	NCBI_TaxID=9615;					
RN	[1]					
RP	PROTEIN SEQUENCE.					
RX	MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;					
RA	Eng J., Du B.-H., Raufman J.-E., Yalow R.S.;					
RT	"Purification and amino acid sequences of dog, goat and guinea pig					
RT	VIPs."					
RL	Peptides 7 Suppl. 1:17-20(1986).					
CC	!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,					
CC	stimulates myocardial contractility, increases glycogenolysis and					
CC	relaxes the smooth muscle of trachea, stomach and gall bladder.					
CC	!- SUBCELLULAR LOCATION: Secreted.					
CC	!- SIMILARITY: Belongs to the glucagon family.					
CC	-----					
CC	This Swiss-Prot entry is copyright. It is produced through a collaboration					
CC	between the Swiss Institute of Bioinformatics and the EMBL outstation -					
CC	the European Bioinformatics Institute. There are no restrictions on its					
CC	use as long as its content is in no way modified and this statement is not					
CC	removed.					
CC	-----					
CC	PIR; A60304; A60304.					
DR	HSSP; P18509; 1GEA.					
DR	Ensembl; ENSCAFG00000000538; Canis familiaris.					
DR	InterPro; IPR000532; Glucagon.					
DR	Pfam; PF00123; Hormone.2; 1.					
DR	PRINTS; PR00275; GLUCAGON.					
DR	SMART; SM00070; GLUCA; 1.					
DR	PROSITE; PS00260; GLUCAGON; 1.					
KW	Amidation; Direct protein sequencing; Glucagon family; Hormone.					
FT	MOD RES 28					
SQ	SEQUENCE 28 AA; 3327 MW; EF313FB573PF63F CRC64;					

Query Match		95.8%	Score 137;	DB 1;	Length 28;
Best Local Similarity		96.4%	Pred. No. 7.6e-13;		
Matches		27;	Conservative	0;	Mismatches 1;
					Indels 0;
					Gaps 0;
Qy	1 HSDAVFTDNYRLRKQMAVKYLSILN 28				
Db	1 HSDAVFTDNYRLRKQMAVKYLSILN 28				

```

RT "Rhesus monkey gastroenteropancreatic hormones: relationship to human
RL sequences.";
CC Regul. Pept. 32:39-45(1991).
CC -|- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -|- SUBCELLULAR LOCATION: Secreted.
CC -|- SIMILARITY: Belongs to the glucagon family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC PIR; B60071; B60071.
CC InterPro; IPR000532; Glucagon.
CC Pfam; PF00123; Hormone_2; 1.
CC PRINTS; PR00275; GLUCAGON.
CC SMART; SM00070; GLUC; 1.
CC PROSITE; PS00260; GLUCAGON; 1.
CC AMIDATION; Direct protein sequencing; Glucagon family; Hormone.
FT MOD_RES 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.6e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 4
VIP_SHEEP
ID VIP_SHEEP STANDARD; PRT; 28 AA.
AC P63291; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
DE Name=VIP;
OS Ovis aries (Sheep).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Ovis.
OX NCBI_TaxID=9940;
RN [1]
RP PROTEIN SEQUENCE.
RC TISSUE=Brain;
RX MEDLINE=91045331; PubMed=2235680; DOI=10.1016/0196-9781(90)90184-7;
RA Gafovelin G.;
RT "Isolation and primary structure of VIP from sheep brain.";
RL Peptides 11:703-706(1990).
RN [2]
RP PROTEIN SEQUENCE.
RC TISSUE=Small intestine;
RX MEDLINE=91239834; PubMed=2034821; DOI=10.1016/0167-0115(91)90044-H;
RA Boujnoua Y., Vandermeers A., Robberecht P., Vandermeers-Piret M.C.,
RA Christophe J.;
RT "Purification and amino acid sequence of vasoactive intestinal
RT peptide, peptide histidine isoleucineamide and secretin from the ovine
RT small intestine.";
RL Regul. Pept. 32:169-179(1991).
RN [3]
RP PROTEIN SEQUENCE.
RC TISSUE=Hypothalamus, and Intestine;
RX PubMed=1574609; DOI=10.1016/0167-0115(92)90053-W;
RA Miyata A., Jiang L., Stibbs H.H., Arimura A.;
RT "Chemical characterization of vasoactive intestinal polypeptide-like
RT immunoreactivity in ovine hypothalamus and intestine.";

```


OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
 OC Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RN NUCLEOTIDE SEQUENCE.
 RX MEDLINE=83271523; PubMed=6571696;
 RA Itoh N., Obata K.-I., Yanaiharu N., Okamoto H.;
 RT "Human preprovasoactive intestinal polypeptide contains a novel PHI-
 RT 27-like peptide, PHM-27.";
 RL Nature 304:547-549(1983).
 RN [2]
 RN NUCLEOTIDE SEQUENCE.
 RX MEDLINE=88267775; PubMed=2839091;
 RA Yamagami T., Ohsawa K., Nishizawa M., Inoue C., Gotoh E.,
 RA Yanaiharu N., Yamamoto H., Okamoto H.;
 RT "Complete nucleotide sequence of human vasoactive intestinal
 RT peptide/PHM-27 gene and its inducible promoter.";
 RL Ann. N. Y. Acad. Sci. 527:87-102(1988).
 RN [3]
 RN NUCLEOTIDE SEQUENCE.
 RX MEDLINE=86004865; PubMed=3899557;
 RA Tsukada T., Horovitch S.J., Montminy M.R., Mandel G., Goodman R.H.;
 RT "Structure of the human vasoactive intestinal polypeptide gene.";
 RL DNA 4:293-300(1985).
 RN [4]
 RN NUCLEOTIDE SEQUENCE.
 RX MEDLINE=87092456; PubMed=3025882;
 RA Linder S., Barkhem T., Norberg A., Persson H., Schalling M.,
 RA Hoekfelt T., Magnusson G.;
 RT "Structure and expression of the gene encoding the vasoactive
 RT intestinal peptide precursor.";
 RL Proc. Natl. Acad. Sci. U.S.A. 84:605-609(1987).
 RN [5]
 RN NUCLEOTIDE SEQUENCE.
 RX MEDLINE=86016352; PubMed=2995945; DOI=10.1016/0196-9781(85)90016-6;
 RA Delamarter J.F., Buell G.N., Kawashima E., Polak J.M., Bloom S.R.;
 RT "Vasoactive intestinal peptide: expression of the prohormone in
 RT bacterial cells.";
 RL Peptides 6:95-102(1985).
 RN [6]
 RN NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
 RC TISSUE=Prostate;
 RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
 RA Brownstein M.J., Ustin T.B., Toshiyuki S., Carninci P., Prange C.,
 RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
 RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 RA Fahey J., Helton E., Kettoun M., Madan A., Rodriguez S., Sanchez A.,
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butterfield J.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
 RA Schnerch A., Schain J.E., Jones S.J.M., Marra M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length human
 RT and mouse cDNA sequences.";
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 RN [7]
 RN NUCLEOTIDE SEQUENCE OF 8-170.
 RX MEDLINE=86313155; PubMed=3748844; DOI=10.1016/0196-9781(86)90156-7;
 RA Gozes I., Bodener M., Shani Y., Fridkin M.;
 RT "Structure and expression of the vasoactive intestinal peptide (VIP)
 RT gene in a human tumor.";
 RL Peptides 7:1-6(1986).
 RN [8]
 RN NUCLEOTIDE SEQUENCE OF 50-170.
 RC TISSUE=Pancratic carcinoma;

RX MEDLINE=84066682; PubMed=6139527; DOI=10.1016/S0140-6736(83)91215-1;
 RA Bloom S.R., Delamarter J.F., Kawashima E., Christofides N.D.,
 RA Buell G., Polak J.M.;
 RT "Diarrhoea in vipoma patients associated with cosecretion of a second
 RT active peptide (peptide histidine isoleucine) explained by single
 RT coding gene.";
 RL Lancet 2:1163-1165(1983).
 RN [9]
 RN NUCLEOTIDE SEQUENCE OF 78-155.
 RP MEDLINE=87140054; PubMed=2434617;
 RA Gozes I., Giladi E., Shani Y.;
 RT "Vasoactive intestinal peptide gene: putative mechanism of information
 RT storage at the RNA level.";
 RL J. Neurochem. 47:1136-1141(1987).
 RN [10]
 RN PROTEIN SEQUENCE OF 81-122.
 RP MEDLINE=88007645; PubMed=3654650;
 RA Yangou Y., di Marzo V., Spokes R.A., Panico M., Morris H.R.,
 RA Bloom S.R.;
 RT "Isolation, characterization, and pharmacological actions of peptide
 RT histidine valine 42, a novel prepro-vasoactive intestinal peptide-
 RT derived peptide.";
 RL J. Biol. Chem. 262:14010-14013(1987).
 RN [11]
 RN PROTEIN SEQUENCE OF 127-152.
 RC TISSUE=Phochromocytoma;
 RX MEDLINE=92287083; PubMed=1318039;
 RA Kitamura K., Kangawa K., Kawamoto M., Ichiki Y., Matsuo H., Eto T.;
 RT "Isolation and characterization of peptides which act on rat
 RT platelets, from a pheochromocytoma.";
 RL Biochem. Biophys. Res. Commun. 185:134-141(1992).
 RN [12]
 RN STRUCTURE BY NMR OF VIP.
 RP MEDLINE=9132343; PubMed=1863695;
 RA Theriault Y., Boulanger Y., St Pierre S.;
 RT "Structural determination of the vasoactive intestinal peptide by two-
 RT dimensional H-NMR spectroscopy.";
 RL Biopolymers 31:459-464(1991).
 CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -!- FUNCTION: PHM and PHV also cause vasodilation.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: Belongs to the glucagon family.
 CC
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC -----
 DR EMBL; L00157; AAA61289.1; -; Genomic DNA.
 DR EMBL; L00154; AAA61289.1; JOINED; Genomic DNA.
 DR EMBL; L00155; AAA61289.1; JOINED; Genomic DNA.
 DR EMBL; L00156; AAA61289.1; JOINED; Genomic DNA.
 DR EMBL; M33027; AAA69515.1; -; Genomic DNA.
 DR EMBL; M11553; AAA61284.1; -; Genomic DNA.
 DR EMBL; M11549; AAA61284.1; JOINED; Genomic DNA.
 DR EMBL; M11550; AAA61284.1; JOINED; Genomic DNA.
 DR EMBL; M11551; AAA61284.1; JOINED; Genomic DNA.
 DR EMBL; M11552; AAA61284.1; JOINED; Genomic DNA.
 DR EMBL; M14623; AAA61288.1; -; Genomic DNA.
 DR EMBL; M14619; AAA61288.1; JOINED; Genomic DNA.
 DR EMBL; M14620; AAA61288.1; JOINED; Genomic DNA.
 DR EMBL; M14621; AAA61288.1; JOINED; Genomic DNA.
 DR EMBL; M14622; AAA61288.1; JOINED; Genomic DNA.
 DR EMBL; M36610; AAA61286.1; -; Genomic DNA.
 DR EMBL; M36606; AAA61286.1; JOINED; Genomic DNA.
 DR EMBL; M36607; AAA61286.1; JOINED; Genomic DNA.
 DR EMBL; M36608; AAA61286.1; JOINED; Genomic DNA.
 DR EMBL; M36609; AAA61286.1; JOINED; Genomic DNA.
 DR EMBL; BC009794; AAH09794.1; -; mRNA.
 DR EMBL; M36634; AAA61287.1; -; mRNA.

DR EMBL; M54930; AAA63268.1; -; mRNA.
 DR EMBL; M32162; AAA61285.1; -; Genomic DNA.
 DR EMBL; M31645; AAA61285.1; JOINED; Genomic DNA.
 DR PIR; A23296; VRHU.
 DR HSSP; P18509; 1GEA.
 DR Ensembl; ENSG00000146469; Homo sapiens.
 DR HGNC; HGNC:12693; VIP.
 DR H-InvDB; HIX0006306; -.
 DR MIM; 192320; -.
 DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
 DR GO; GO:0007589; P:fluid secretion; TAS.
 DR GO; GO:0007186; P:G-protein coupled receptor protein signalin...; TAS.
 DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone_2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 KW Amidation; Cleavage on pair of basic residues;
 KW Direct protein sequencing; Glucagon family; Hormone; Signal.
 FT SIGNAL 1 20 Potential.
 FT PROPEP 21 79 Intestinal peptide PHV-42.
 FT PEPTIDE 81 122 Intestinal peptide PHM-27.
 FT PEPTIDE 81 107 Vasoactive intestinal peptide.
 FT PEPTIDE 125 152
 FT PROPEP 156 170
 FT MOD_RES 107 107 Methionine amide (G-108 provides amide group).
 FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group).
 FT CONFLICT 96 97 QL -> PP (in Ref. 7).
 FT CONFLICT 113 113 Missing (in Ref. 6).
 FT CONFLICT 116 116 S -> L (in Ref. 4).
 FT CONFLICT 136 136 R -> G (in Ref. 4).
 SQ SEQUENCE 170 AA; 19169 MW; 93BC0177F89508FD CRC64;
 Query Match 95.8%; Score 137; DB 1; Length 170;
 Best Local Similarity 96.4%; Pred. No. 5.1e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Oy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
 Db 125 HSDAVFTDNYRLRKQMAVKKYLNSILN 152
 RESULT 13
 VIP_MOUSE STANDARD; PRT; 170 AA.
 ID VIP_MOUSE
 AC P32648;
 DT 01-OCT-1993 (Rel. 27, Created)
 DT 01-OCT-1993 (Rel. 27, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
 DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
 DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
 DE Name=Vip;
 GN Mus musculus (Mouse).
 OS Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
 OC Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
 RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
 RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
 RT "Characterization of the gene and messages for vasoactive intestinal polypeptide (VIP) in rat and mouse."
 RL Brain Res. Mol. Brain Res. 9:217-231(1991).
 RN [2]
 RP NUCLEOTIDE SEQUENCE OF 1-36.
 RC STRAIN=C57BL/6; TISSUE=Spleen;
 RX MEDLINE=95201289; PubMed=7894056;
 RA Sena M., Bravo D.T., Agoston D., Waschek J.A.;

RT "High conservation of upstream regulatory sequences on the human and mouse vasoactive intestinal peptide (VIP) genes."
 RL DNA Seq. 5:25-29(1994).
 CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -1- FUNCTION: PHM also causes vasodilation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the glucagon family.
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.
 CC -----
 CC EMBL; X74297; CAA52350.1; -; Genomic DNA.
 DR PIR; A60037; A60037.
 DR HSSP; P18509; 1GEA.
 DR Ensembl; ENSMUSG00000019772; Mus musculus.
 DR MGI; MGI:98933; Vip.
 DR GO; GO:0005615; C:extracellular space; TAS.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone_2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 KW Amidation; Cleavage on pair of basic residues; Glucagon family;
 KW Glycoprotein; Hormone; Signal.
 FT SIGNAL 1 21 By similarity.
 FT PROPEP 22 79 Intestinal peptide PHI-42 (By similarity).
 FT PEPTIDE 81 122 Intestinal peptide PHI-27.
 FT PEPTIDE 81 107 Vasoactive intestinal peptide.
 FT PEPTIDE 125 152
 FT PROPEP 156 170
 FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide group).
 FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group).
 FT CARBOHYD 133 133 N-linked (GlcNAc...) (Potential).
 SQ SEQUENCE 170 AA; 19049 MW; 0164C831F8F5C73D CRC64;
 Query Match 95.8%; Score 137; DB 1; Length 170;
 Best Local Similarity 96.4%; Pred. No. 5.1e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Oy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
 Db 125 HSDAVFTDNYRLRKQMAVKKYLNSILN 152
 RESULT 14
 VIP_RAT STANDARD; PRT; 170 AA.
 ID VIP_RAT
 AC P01283;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 01-OCT-1993 (Rel. 27, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
 DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
 DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
 DE Name=Vip;
 GN Rattus norvegicus (Rat).
 OS Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
 OC Muridae; Murinae; Rattus.
 OX NCBI_TaxID=10116;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
 RX MEDLINE=90244869; PubMed=2159586; DOI=10.1016/0169-328X(90)90036-D;
 RA Giladi E., Shani Y., Gozes I.;
 RT "The complete structure of the rat VIP gene."

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RL Brain Res. Mol. Brain Res. 7:261-267(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 9-170.
RC TISSUE=Brain cortex;
RA MEDLINE=85154612; PubMed=3838518; DOI=10.1016/0014-5793(85)80953-4;
RX Nishizawa M., Hayakawa Y., Yanaihara N., Okamoto H.;
RT "Nucleotide sequence divergence and functional constraint in VIP
precursor mRNA evolution between human and rat.";
RL FEBS Lett. 183:55-59(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=91232388; PubMed=181524; DOI=10.1016/0169-328X(91)90005-I;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [4]
RP PROTEIN SEQUENCE OF 134-152.
RX MEDLINE=88243784; PubMed=3379062;
RA Goetzl E.J., Sreedharan S.P., Turck C.W.;
RT "Structurally distinctive vasoactive intestinal peptides from rat
basophilic leukemia cells.";
RL J. Biol. Chem. 263:9083-9086(1988).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
stimulates myocardial contractility, increases glycogenolysis and
relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
between the Swiss Institute of Bioinformatics and the EMBL outstation -
the European Bioinformatics Institute. There are no restrictions on its
use as long as its content is in no way modified and this statement is not
removed.
CC -----
DR EMBL; X02341; CAA26200.1; -; mRNA.
DR PIR; A60053; VRRT.
DR HSRP; P18509; IGEA.
DR Ensembl; ENSRNOG00000018808; Rattus norvegicus.
DR RGD; 621647; Vip.
DR GO; GO:0042311; P:vasodilation; NAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;
KW Signal.
FT SIGNAL 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT -----
FT Intestinal peptide PHV-42 (By
FT similarity).
FT PEPTIDE 81 107
FT Intestinal peptide PHR-27.
FT PEPTIDE 125 152
FT Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107
FT Isoleucine amide (G-108 provides amide
FT group).
FT MOD_RES 152 152
FT Asparagine amide (G-153 provides amide
FT group).
FT CARBOHYD 68 68
FT N-linked (GlcNAc...) (Potential).
FT CARBOHYD 133 133
FT N-linked (GlcNAc...) (Potential).
SQ SEQUENCE 170 AA; 19079 MW; 202AE82EBBD190B CRC64;
Query Match 95.8%; Score 137; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 5.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTLRLKQMAVKKYLNSILN 152
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RESULT 15
QSTCY9 HUMAN
ID QSTCY9 HUMAN PRELIMINARY; PRT; 170 AA.
AC QSTCY9;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-001;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN NUCLEOTIDE SEQUENCE.
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CA121764.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 170 AA; 19168 MW; 93EC0177F89508FD CRC64;
Query Match 95.8%; Score 137; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 5.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTLRLKQMAVKKYLNSILN 152
Search completed: January 25, 2006, 15:18:40
Job time : 76 secs
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-8

Perfect score: 144

Sequence: 1 HSDAVFTDNYTRLRQKRVKYLNSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : A_Geneseq_21.*

- 1: Geneseqp1980s.*
- 2: Geneseqp1990s.*
- 3: Geneseqp2000s.*
- 4: Geneseqp2001s.*
- 5: Geneseqp2002s.*
- 6: Geneseqp2003as.*
- 7: Geneseqp2003bs.*
- 8: Geneseqp2004s.*
- 9: Geneseqp2005s.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	144	100.0	28	5	ADH68846
2	141	97.9	28	5	ADH68842
3	140	97.2	28	5	ADH68845
4	138	95.8	28	1	AAP10172
5	138	95.8	28	1	AAP71039
6	138	95.8	28	2	AAR34943
7	138	95.8	28	2	AAR40272
8	138	95.8	28	2	AAR53111
9	138	95.8	28	2	AAR53109
10	138	95.8	28	2	AAR53110
11	138	95.8	28	2	AAR87092
12	138	95.8	28	2	AAR83785
13	138	95.8	28	2	AAR97810
14	138	95.8	28	2	AAR93023
15	138	95.8	28	2	AAW65188
16	138	95.8	28	2	AAW06120
17	138	95.8	28	2	AAW06119
18	138	95.8	28	2	AAW06114
19	138	95.8	28	2	AAW06113
20	138	95.8	28	2	AAW06121
21	138	95.8	28	2	AAW06122
22	138	95.8	28	2	AAW06115
23	138	95.8	28	2	AAW06112
24	138	95.8	28	2	AAW37791

25	138	95.8	28	2	AAW71677	Aaw71677 Vasoactiv
26	138	95.8	28	2	AAV30769	Aay30769 Vasoactiv
27	138	95.8	28	2	AAV44196	Aay44196 Human vas
28	138	95.8	28	3	AAV94560	Aay94560 Vasoactiv
29	138	95.8	28	4	AAV85707	Aab85707 Peptide h
30	138	95.8	28	4	AAV85710	Aab85710 Peptide h
31	138	95.8	28	4	AAV91279	Aab91279 Vasoactiv
32	138	95.8	28	4	AAV91278	Aab91278 Vasoactiv
33	138	95.8	28	4	AAE12028	Aae12028 Porcine v
34	138	95.8	28	4	AAE17111	Aab37111 Human vas
35	138	95.8	28	4	AAV70459	Aag70459 Vasoactiv
36	138	95.8	28	4	AAV50845	Aab50845 Human pro
37	138	95.8	28	4	AAU09653	Aau09653 Porcine i
38	138	95.8	28	4	AAV45614	Aab45614 Native va
39	138	95.8	28	5	AAE19604	Aae19604 Human ste
40	138	95.8	28	5	AAE19627	Aae19627 Human vas
41	138	95.8	28	5	AAE19603	Aae19603 Human vas
42	138	95.8	28	5	ABB06677	Abb06677 Mammalian
43	138	95.8	28	5	AAU85989	Aau85989 Modified
44	138	95.8	28	5	AAU97783	Aau97783 Tumour sp
45	138	95.8	28	5	ABG94152	Abg94152 Human vas

ALIGNMENTS

RESULT 1

ID	ADH68846	standard; peptide; 28 AA.
XX	ADH68846;	
AC	ADH68846;	
XX		
DT	25-MAR-2004	(first entry)
XX		
DE	Synthetic VIP analogue #153.	
XX		
KW	conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;	
KW	tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;	
KW	bladder; cervix.	
XX		
OS	Synthetic.	
XX		
FN	EP1170021-A2.	
XX		
PD	09-JAN-2002.	
XX		
PF	14-MAY-2001; 2001EP-00250164.	
XX		
PR	15-MAY-2000; 2000US-00571407.	
XX	(SCHD) SCHERING AG.	
PA	Bauer M, Becker A, Licha K, Bornhop D, Platzek J;	
XX		
PI		
XX	WPI; 2002-099222/14.	
DR		
XX		
PT	New peptide-lanthanide chelate conjugates, useful in optical or	
PT	fluorescence methods for diagnosis of diseased tissue, e.g. tumors or	
PT	inflammation.	
XX		
PS	Claim 21; SEQ ID NO 156; 97pp; German.	
XX		
CC	This invention describes novel conjugates of vasoactive intestinal	
CC	peptide (VIP), somatostatin, neurotensin or related peptides with	
CC	polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.	
CC	Preparation of the conjugates involves preparing a metal complex, then	
CC	coupling the product with a peptide by aminolysis of a corresponding	
CC	active ester. The conjugates can be administered topically or	
CC	intravenously. The use of the conjugates of the invention are claimed for	
CC	in-vivo diagnosis of tumors, other diseased tissue regions or adenomas	
CC	by an optical detection method or for in vivo fluorescence diagnosis of	
CC	tumours, tumour cells and/or inflamed tissue by an endoscopic method in	
CC	the gastrointestinal tract, oesophagus, bronchial tract, bladder or	

CC cervix. The claims also cover (i) a method of endoscopic in-vivo
 CC fluorescence diagnosis, involving applying the conjugates topically by
 CC spraying in the gastrointestinal tract, oesophagus or bladder or by
 CC inhalation to the bronchi, optionally removing non-bonded excess
 CC conjugates by washing and carrying out the endoscopic investigation by
 CC local excitation at a wavelength of 250-450 nm and local detection of the
 CC specific fluorescent radiation emitted by the conjugates and (ii) an
 CC optical diagnostic composition for in vivo diagnosis of diseased tissue
 CC regions, comprising at least one compound conjugated together with
 CC conventional auxiliaries, carriers and/or diluents. The conjugate is also
 CC enriched in the lymph nodes on intravenous administration, and can thus
 CC be used to facilitate identification of the lymph nodes (by fluorescence)
 CC during surgery. The conjugate is selectively enriched in diseased tissue
 CC and after excitation with light of a suitable wavelength provides long-
 CC lasting fluorescence (specifically having a life in the millisecond
 CC range) in the 480-600 nm wavelength region (in which the human eye is
 CC most sensitive), the life of the fluorescence of the conjugate exceeding
 CC that of the autofluorescence of the tissue. The endoscopic diagnosis of
 CC surface tumours is thus facilitated. The conjugates can be applied
 CC topically, e.g. by spraying. ADH68691-ADH68931 represent peptide
 CC conjugates described in the disclosure of the invention.

Sequence 28 AA;

Query Match 100.0%; Score 144; DB 5; Length 28;
 Best Local Similarity 100.0%; Pred. No. 4.6e-12;
 Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMKVKYLSILN 28
 |||||
 DB 1 HSDAVFTDNYTLRKQMKVKYLSILN 28

RESULT 2

ADH68842

ID ADH68842 standard; peptide; 28 AA.
 XX
 AC ADH68842;
 XX
 DT 25-MAR-2004 (first entry)
 XX
 DE Synthetic VIP analogue #149.
 XX
 KW conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;
 KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;
 KW bladder; cervix.

OS Synthetic.

PN EP1170021-A2.

PD 09-JAN-2002.

PF 14-MAY-2001; 2001EP-00250164.

PR 15-MAY-2000; 2000US-00571407.

PA (SCHD) SCHERING AG.

PI Bauer M, Becker A, Licha K, Bornhop D, Platzek J;

DR WPI; 2002-099222/14.

PT New peptide-lanthanide chelate conjugates, useful in optical or
 PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or
 PT inflammation.

PS Claim 21; SEQ ID NO 152; 97pp; German.

XX This invention describes novel conjugates of vasoactive intestinal
 CC peptide (VIP), somatostatin, neurotensin or related peptides with
 CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.
 CC Preparation of the conjugates involves preparing a metal complex, then

CC coupling the product with a peptide by aminolysis of a corresponding
 CC active ester. The conjugates can be administered topically or
 CC intravenously. The use of the conjugates of the invention are claimed for
 CC in-vivo diagnosis of tumours, other diseased tissue regions or adenomas
 CC by an optical detection method or for in vivo fluorescence diagnosis of
 CC tumours, tumour cells and/or inflamed tissue by an endoscopic method in
 CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or
 CC cervix. The claims also cover (i) a method of endoscopic in-vivo
 CC fluorescence diagnosis, involving applying the conjugates topically by
 CC spraying in the gastrointestinal tract, oesophagus or bladder or by
 CC inhalation to the bronchi, optionally removing non-bonded excess
 CC conjugates by washing and carrying out the endoscopic investigation by
 CC local excitation at a wavelength of 250-450 nm and local detection of the
 CC specific fluorescent radiation emitted by the conjugates and (ii) an
 CC optical diagnostic composition for in vivo diagnosis of diseased tissue
 CC regions, comprising at least one compound conjugated together with
 CC conventional auxiliaries, carriers and/or diluents. The conjugate is also
 CC enriched in the lymph nodes on intravenous administration, and can thus
 CC be used to facilitate identification of the lymph nodes (by fluorescence)
 CC during surgery. The conjugate is selectively enriched in diseased tissue
 CC and after excitation with light of a suitable wavelength provides long-
 CC lasting fluorescence (specifically having a life in the millisecond
 CC range) in the 480-600 nm wavelength region (in which the human eye is
 CC most sensitive), the life of the fluorescence of the conjugate exceeding
 CC that of the autofluorescence of the tissue. The endoscopic diagnosis of
 CC surface tumours is thus facilitated. The conjugates can be applied
 CC topically, e.g. by spraying. ADH68691-ADH68931 represent peptide
 CC conjugates described in the disclosure of the invention.

Sequence 28 AA;

Query Match 97.9%; Score 141; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.2e-11;
 Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMKVKYLSILN 28
 |||||
 DB 1 HSDAVFTDNYTLRKQMKVKYLSILN 28

RESULT 3

ADH68845

ID ADH68845 standard; peptide; 28 AA.

XX

AC ADH68845;

XX

DT 25-MAR-2004 (first entry)

XX

DE Synthetic VIP analogue #152.

XX

KW conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;

KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;

KW bladder; cervix.

OS Synthetic.

XX

PN EP1170021-A2.

XX

PD 09-JAN-2002.

PF 14-MAY-2001; 2001EP-00250164.

PR 15-MAY-2000; 2000US-00571407.

XX (SCHD) SCHERING AG.

XX

PI Bauer M, Becker A, Licha K, Bornhop D, Platzek J;

XX

DR WPI; 2002-099222/14.

XX

PT New peptide-lanthanide chelate conjugates, useful in optical or

PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or

PT inflammation.

XX PS Claim 21; SEQ ID NO 155; 97pp; German.

XX CC This invention describes novel conjugates of vasoactive intestinal

CC peptide (VIP), somatostatin, neurotensin or related peptides with

CC polyamino poly-carboxylic or -phosphonic acid lanchanide complexes.

CC Preparation of the conjugates involves preparing a metal complex, then

CC coupling the product with a peptide by aminolysis of a corresponding

CC active ester. The conjugates can be administered topically or

CC intravenously. The use of the conjugates of the invention are claimed for

CC in-vivo diagnosis of tumours, other diseased tissue regions or adenomas

CC by an optical detection method or for in vivo fluorescence diagnosis of

CC tumours, tumour cells and/or inflamed tissue by an endoscopic method in

CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or

CC cervix. The claims also cover (i) a method of endoscopic in-vivo

CC fluorescence diagnosis, involving applying the conjugates topically by

CC spraying in the gastrointestinal tract, oesophagus or bladder or by

CC inhalation to the bronchi, optionally removing non-bonded excess

CC conjugates by washing and carrying out the endoscopic investigation by

CC local excitation at a wavelength of 250-450 nm and local detection of the

CC specific fluorescent radiation emitted by the conjugates and (ii) an

CC optical diagnostic composition for in vivo diagnosis of diseased tissue

CC regions, comprising at least one compound conjugated together with

CC conventional auxiliaries, carriers and/or diluents. The conjugate is also

CC enriched in the lymph nodes on intravenous administration, and can thus

CC be used to facilitate identification of the lymph nodes (by fluorescence)

CC during surgery. The conjugate is selectively enriched in diseased tissue

CC and after excitation with light of a suitable wavelength provides long-

CC lasting fluorescence (specifically having a life in the millisecond

CC range) in the 480-600 nm wavelength region (in which the human eye is

CC most sensitive), the life of the fluorescence of the conjugate exceeding

CC that of the autofluorescence of the tissue. The endoscopic diagnosis of

CC surface tumours is thus facilitated. The conjugates can be applied

CC topically, e.g. by spraying. ADH69691-ADH69931 represent peptide

CC conjugates described in the disclosure of the invention.

XX SQ Sequence 28 AA;

Query Match 97.2%; Score 140; DB 5; Length 28;

Best Local Similarity 96.4%; Pred. No. 1.6e-11;

Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

Db 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

RESULT 4

AAP10172

ID AAP10172 standard; peptide; 28 AA.

XX AC AAP10172;

XX DT 25-MAR-2003 (revised)

XX DT 21-DEC-1992 (first entry)

XX DE VIP.

XX KW Vasoactive intestinal polypeptide;

XX KW allergic asthma. chemical mediator isolation-inhibiting action.

XX OS Homo sapiens.

XX FN JP56128721-A.

XX PD 08-OCT-1981.

XX PF 12-MAR-1980; 80JP-00030308.

XX PR 12-MAR-1980; 80JP-00030308.

XX PA (EISA) EISA CO LTD.

DR WPI; 1981-86052D/47.

XX PT Antiallergic agent comprises peptide - contg. 28 amino acid units, is

XX PT active against e.g. bronchial asthma and hay fever.

XX PS Claim 1; Page 1; 3pp; Japanese.

XX CC The sequence given can be used as the active component in an antiallergic

CC agent. Vasoactive intestinal polypeptide (VIP) has chemical mediator

CC isolation-inhibiting action and is effective for therapy and prevention

CC of various allergic diseases, such as allergic rhinitis, bronchial

CC asthma, allergic asthma, hay fever, urticaria, eczema, atopic dermatitis

CC etc. Since it also has specific bronchial smooth muscle relaxant action,

CC it is esp. useful for treating and preventing bronchial and allergic

CC asthma. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-

CC 2003 to correct PA field.)

XX SQ Sequence 28 AA;

Query Match 95.8%; Score 138; DB 1; Length 28;

Best Local Similarity 96.4%; Pred. No. 2.9e-11;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

Db 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

RESULT 5

AAP71039

ID AAP71039 standard; peptide; 28 AA.

XX AC AAP71039;

XX DT 03-OCT-2002 (revised)

XX DT 05-APR-1991 (first entry)

XX DE Sequence of active ingredient in hair growth promoting compen.

XX KW Vasoactive intestinal tract polypeptide; digestive tract polypeptide;

XX KW hair growth promoter.

XX OS Synthetic.

XX PN EP225639-A.

XX PD 16-JUN-1987.

XX PF 10-DEC-1986; 86EP-00117190.

XX PR 10-DEC-1985; 85JP-00276099.

XX PA (MEIJ) MEIJI SEIKA KAISHA.

XX PI Yanaihara N, Watanabe S, Kasai M, Sato T, Kikkoji T;

XX WPI; 1987-164873/24.

XX PT Hair growth promoting compen. - contg. vasoactive intestinal polypeptide

XX PT and carrier.

XX PS Claim 1; Page 8; 10pp; English.

XX CC When applied to the skin, the peptide causes a local increase in blood

XX CC flow and promotes hair growth. It is the natural peptide known as

XX CC vasoactive intestinal polypeptide which has been isolated from the

XX CC digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)

XX SQ Sequence 28 AA;

Query Match 95.8%; Score 138; DB 1; Length 28;

Best Local Similarity 96.4%; Pred. No. 2.9e-11;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28
 Db 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28

RESULT 6
 AAR34943
 ID AAR34943 standard; peptide; 28 AA.
 AC AAR34943;
 XX
 DT 25-MAR-2003 (revised)
 DT 28-JUL-1993 (first entry)
 XX
 DE Porcine VIP.
 XX
 KW Vasoactive intestinal peptide; asthma; bronchodilation activity;
 KW bronchiotracheal constrictive disorders.
 OS Sus scrofa.
 XX
 PN EP536741-A2.
 XX
 PD 14-APR-1993.
 XX
 PF 08-OCT-1992; 92EP-00117185.
 PR 11-OCT-1991; 91US-00773747.
 XX
 PA (HOFF) HOFFMANN LA ROCHE & CO AG F.
 PI Bolin DR, Odonnell M;
 XX
 DR WPI; 1993-118996/15.
 XX
 PT New cyclic vasoactive intestinal peptide (VIP) analogues - are useful for
 PT the treatment of bronchotracheal constrictive disorders e.g. asthma.
 PS Disclosure; Page 65; 141pp; English.
 XX
 CC The sequence is that of porcine vasoactive intestinal peptide (VIP) as
 CC claimed in EP-325044. The peptide sequence was used to design cyclic
 CC analogues of VIP which have enhanced bronchodilation activity without any
 CC observable side effects such as cardiovascular side effects. The
 CC bronchodilation produced by the analogues can be sustained for more than
 CC two hours. The analogues may be used for the treatment of bronchotracheal
 CC constrictive disorders, e.g. asthma. See also RR3944-5016. (Updated on 25
 CC -MAR-2003 to correct PN field.)
 XX
 SQ Sequence 28 AA;

Query Match 95.8%; Score 138; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.9e-11;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28
 Db 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28

RESULT 7
 AAR40272
 ID AAR40272 standard; protein; 28 AA.
 AC AAR40272;
 XX
 DT 25-MAR-2003 (revised)
 DT 09-FEB-1994 (first entry)
 XX
 DE Native VIP.
 XX
 KW Vasoactive intestinal peptide; VIP; bronchodilator; cardiovascular;

side effect; bronchoconstrictive disorder; asthma.
 Sus scrofa.
 Key Location/Qualifiers
 Modified-site 28
 /note= "C-terminal is amidated"
 US5234907-A.
 10-AUG-1993.
 24-APR-1991; 91US-00690300.
 30-JUN-1989; 89US-00374503.
 (HOFF) HOFFMANN LA ROCHE INC.
 Bolin DR;
 WPI; 1993-264645/33.
 New vasoactive intestinal peptide analogues - are potent bronchodilators
 without cardiovascular side effects, used for treating, e.g. asthma.
 Disclosure; Page 25-26; 66pp; English.
 VIP (AAR40272) was used in the prodn. of analogues (AAR40273-78: generic
 formulae; AAR40279-364: examples). The VIP analogues are potent
 bronchodilators and have no cardiovascular side effects. They are used
 for the treatment of bronchoconstrictive disorders, e.g. asthma. (Updated
 on 25-MAR-2003 to correct PF field.)
 Sequence 28 AA;

Query Match 95.8%; Score 138; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.9e-11;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28
 Db 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28

RESULT 8
 AAR53111
 ID AAR53111 standard; peptide; 28 AA.
 AC AAR53111;
 XX
 DT 20-DEC-1994 (first entry)
 XX
 DE Bronchodilator peptide #21.
 KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
 KW selectively; toxicity; mammal; bronchodilator.
 XX
 OS Synthetic.
 XX
 FH Key Location/Qualifiers
 FT Misc-difference 10
 /note= "D-form residue"
 FT Misc-difference 22
 /note= "D-form residue"
 FT Modified-site 28
 /note= "Amidated C-terminal"
 XX
 PN JP06092991-A.
 XX
 PD 05-APR-1994.
 XX
 PF 28-FEB-1991; 91JP-00034335.
 XX

CC	mammals. These peptides may be used as bronchodilators. They are prepared by solid phase synthesis using a resin having an amino functional group capable of bonding to the amino acid at the carboxy terminal through a carboxyl group and fixing the peptide chain during the synthesis
XX	
XX	
SQ	Sequence 28 AA;
Query Match	95.8%; Score 138; DB 2; Length 28;
Best Local Similarity	96.4%; Pred. No. 2.9e-11;
Matches	27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY	1 HSDAVFTDNYTRLRKQMRVKVLYNSILN 28
Dd	1 HSDAVFTDNYTRLRKQMRVKVLYNSILN 28
RESULT 10	
AAR53110	
ID	AAR53110 standard; peptide; 28 AA.
XX	
AC	AAR53110;
XX	
DT	20-DEC-1994 (first entry)
XX	
DE	Bronchodilator peptide #20.
XX	
KW	Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
KX	selectively; toxicity; mammal; bronchodilator.
OS	Synthetic.
XX	
FH	Key Location/Qualifiers
FT	Misc-difference 22 /note= "D-form residue"
FT	Modified-site 28
FT	/note= "Amidated C-terminal"
XX	
PN	JP06092991-A.
XX	
PD	05-APR-1994.
XX	
PF	28-FEB-1991; 91JP-00034335.
XX	
PR	28-FEB-1991; 91JP-00034335.
XX	
PA	(DAI) DAICEL CHEM IND LTD.
PA	(MEIJ) MEIJI SEIKA KAISHA.
XX	
DR	WPI; 1994-147946/18.
XX	
PT	Active peptide(s), having smooth muscle relaxing activity - useful as bronchodilators.
XX	
PS	Disclosure; Page 5; 29pp; Japanese.
XX	
CC	The sequences given in AAR53091-111 are synthetic peptides based on vasoactive intestinal peptide (VIP) which have the activity of relaxing the smooth muscle selectively and are only low toxic-non- toxic to mammals. These peptides may be used as bronchodilators. They are prepared by solid phase synthesis using a resin having an amino functional group capable of bonding to the amino acid at the carboxy terminal through a carboxyl group and fixing the peptide chain during the synthesis
XX	
XX	
SQ	Sequence 28 AA;
Query Match	95.8%; Score 138; DB 2; Length 28;
Best Local Similarity	96.4%; Pred. No. 2.9e-11;
Matches	27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY	1 HSDAVFTDNYTRLRKQMRVKVLYNSILN 28
Dd	1 HSDAVFTDNYTRLRKQMRVKVLYNSILN 28
RESULT 9	
AAR53109	
ID	AAR53109 standard; peptide; 28 AA.
XX	
AC	AAR53109;
XX	
DT	20-DEC-1994 (first entry)
XX	
DE	Bronchodilator peptide #19.
XX	
KW	Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
KX	selectively; toxicity; mammal; bronchodilator.
OS	Synthetic.
XX	
FH	Key Location/Qualifiers
FT	Misc-difference 10 /note= "D-form residue"
FT	Modified-site 28
FT	/note= "Amidated C-terminal"
XX	
PN	JP06092991-A.
XX	
PD	05-APR-1994.
XX	
PF	28-FEB-1991; 91JP-00034335.
XX	
PR	28-FEB-1991; 91JP-00034335.
XX	
PA	(DAI) DAICEL CHEM IND LTD.
PA	(MEIJ) MEIJI SEIKA KAISHA.
XX	
DR	WPI; 1994-147946/18.
XX	
PT	Active peptide(s), having smooth muscle relaxing activity - useful as bronchodilators.
XX	
PS	Disclosure; Page 5; 29pp; Japanese.
XX	
CC	The sequences given in AAR53091-111 are synthetic peptides based on vasoactive intestinal peptide (VIP) which have the activity of relaxing the smooth muscle selectively and are only low toxic-non- toxic to mammals. These peptides may be used as bronchodilators. They are prepared by solid phase synthesis using a resin having an amino functional group capable of bonding to the amino acid at the carboxy terminal through a carboxyl group and fixing the peptide chain during the synthesis
XX	
XX	
SQ	Sequence 28 AA;
Query Match	95.8%; Score 138; DB 2; Length 28;
Best Local Similarity	96.4%; Pred. No. 2.9e-11;
Matches	27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY	1 HSDAVFTDNYTRLRKQMRVKVLYNSILN 28
Dd	1 HSDAVFTDNYTRLRKQMRVKVLYNSILN 28
RESULT 9	
AAR53109	
ID	AAR53109 standard; peptide; 28 AA.
XX	
AC	AAR53109;
XX	
DT	20-DEC-1994 (first entry)
XX	
DE	Bronchodilator peptide #19.
XX	
KW	Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
KX	selectively; toxicity; mammal; bronchodilator.
OS	Synthetic.
XX	
FH	Key Location/Qualifiers
FT	Misc-difference 10 /note= "D-form residue"
FT	Modified-site 28
FT	/note= "Amidated C-terminal"
XX	
PN	JP06092991-A.
XX	
PD	05-APR-1994.
XX	
PF	28-FEB-1991; 91JP-00034335.
XX	
PR	28-FEB-1991; 91JP-00034335.
XX	
PA	(DAI) DAICEL CHEM IND LTD.
PA	(MEIJ) MEIJI SEIKA KAISHA.
XX	
DR	WPI; 1994-147946/18.
XX	
PT	Active peptide(s), having smooth muscle relaxing activity - useful as bronchodilators.
XX	
PS	Disclosure; Page 5; 29pp; Japanese.
XX	
CC	The sequences given in AAR53091-111 are synthetic peptides based on vasoactive intestinal peptide (VIP) which have the activity of relaxing the smooth muscle selectively and are only low toxic-non- toxic to mammals. These peptides may be used as bronchodilators. They are prepared by solid phase synthesis using a resin having an amino functional group capable of bonding to the amino acid at the carboxy terminal through a carboxyl group and fixing the peptide chain during the synthesis
XX	
XX	
SQ	Sequence 28 AA;
Query Match	95.8%; Score 138; DB 2; Length 28;
Best Local Similarity	96.4%; Pred. No. 2.9e-11;
Matches	27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY	1 HSDAVFTDNYTRLRKQMRVKVLYNSILN 28
Dd	1 HSDAVFTDNYTRLRKQMRVKVLYNSILN 28
RESULT 9	
AAR53109	
ID	AAR53109 standard; peptide; 28 AA.
XX	
AC	AAR53109;
XX	
DT	20-DEC-1994 (first entry)
XX	
DE	Bronchodilator peptide #19.
XX	
KW	Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
KX	selectively; toxicity; mammal; bronchodilator.
OS	Synthetic.
XX	
FH	Key Location/Qualifiers
FT	Misc-difference 10 /note= "D-form residue"
FT	Modified-site 28
FT	/note= "Amidated C-terminal"
XX	
PN	JP06092991-A.
XX	
PD	05-APR-1994

PR	28-FEB-1991;	91JP-00034335.	
XX	(DAIL) DAICEL CHEM IND LTD.		
PA	(MEIJ) MEIJI SEIKA KAISHA.		
XX			
XX	WPI; 1994-147946/18.		
DR			
XX	Active peptide(s), having smooth muscle relaxing activity - useful as		
PT	bronchodilators.		
XX			
PS	Disclosure; Page 5; 29pp; Japanese.		
XX			
CC	The sequences given in AAR53091-111 are synthetic peptides based on		
CC	vasoactive intestinal peptide (VIP) which have the activity of relaxing		
CC	the smooth muscle selectively and are only low toxic-non- toxic to		
CC	mammals. These peptides may be used as bronchodilators. They are prepared		
CC	by solid phase synthesis using a resin having an amino functional group		
CC	capable of bonding to the amino acid at the carboxy terminal through a		
CC	carboxyl group and fixing the peptide chain during the synthesis		
XX			
SQ	Sequence 28 AA;		
Query Match	95.8%;	Score 138;	DB 2; Length 28;
Best Local Similarity	96.4%;	Pred. No. 2.9e-11;	
Matches	27;	Conservative	0; Mismatches 1; Indels 0; Gaps 0;
QY	1 HSDAVFTDNYTRLRKQMKVKKYLSILN 28		
DB	1 HSDAVFTDNYTRLRKQMKVKKYLSILN 28		
RESULT 9			
AAR53109			
ID	AAR53109 standard; peptide; 28 AA.		
XX			
AC	AAR53109;		
XX			
DT	20-DEC-1994 (first entry)		
XX			
DE	Bronchodilator peptide #19.		
XX			
KW	Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;		
KW	selectively; toxicity; mammal; bronchodilator.		
XX			
OS	Synthetic.		
PH	Key	Location/Qualifiers	
FT	Misc-difference 10	/note= "D-form residue"	
FT	Modified-site 28	/note= "Amidated C-terminal"	
XX			
PN	JP06092991-A.		
XX			
DT	20-DEC-1994 (first entry)		
XX			
DE	Bronchodilator peptide #19.		
XX			
KW	Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;		
KW	selectively; toxicity; mammal; bronchodilator.		
XX			
OS	Synthetic.		
PH	Key	Location/Qualifiers	
FT	Misc-difference 10	/note= "D-form residue"	
FT	Modified-site 28	/note= "Amidated C-terminal"	
XX			
PN	JP06092991-A.		
XX			
PD	05-APR-1994.		
XX			
PF	28-FEB-1991; 91JP-00034335.		
XX			
PR	28-FEB-1991; 91JP-00034335.		
XX			
PA	(DAIL) DAICEL CHEM IND LTD.		
PA	(MEIJ) MEIJI SEIKA KAISHA.		
XX			
DR	WPI; 1994-147946/18.		
XX			
PT	Active peptide(s), having smooth muscle relaxing activity - useful as		
PT	bronchodilators.		
XX			
PS	Disclosure; Page 5; 29pp; Japanese.		
XX			
CC	The sequences given in AAR53091-111 are synthetic peptides based on		
CC	vasoactive intestinal peptide (VIP) which have the activity of relaxing		
CC	the smooth muscle selectively and are only low toxic-non- toxic to		
CC	mammals. These peptides may be used as bronchodilators. They are prepared		
CC	by solid phase synthesis using a resin having an amino functional group		
CC	capable of bonding to the amino acid at the carboxy terminal through a		
CC	carboxyl group and fixing the peptide chain during the synthesis		
XX			
SQ	Sequence 28 AA;		
Query Match	95.8%;	Score 138;	DB 2; Length 28;
Best Local Similarity	96.4%;	Pred. No. 2.9e-11;	
Matches	27;	Conservative	0; Mismatches 1; Indels 0; Gaps 0;
QY	1 HSDAVFTDNYTRLRKQMKVKKYLSILN 28		
DB	1 HSDAVFTDNYTRLRKQMKVKKYLSILN 28		
RESULT 9			
AAR53109			
ID	AAR53109 standard; peptide; 28 AA.		
XX			
AC	AAR53109;		
XX			
DT	20-DEC-1994 (first entry)		
XX			
DE	Bronchodilator peptide #19.		
XX			
KW	Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;		
KW	selectively; toxicity; mammal; bronchodilator.		
XX			
OS	Synthetic.		
PH	Key	Location/Qualifiers	
FT	Misc-difference 10	/note= "D-form residue"	
FT	Modified-site 28	/note= "Amidated C-terminal"	
XX			
PN	JP06092991-A.		
XX			
PD	05-APR-1994.		
XX			
PF	28-FEB-1991; 91JP-00034335.		
XX			
PR	28-FEB-1991; 91JP-00034335.		
XX			
PA	(DAIL) DAICEL CHEM IND LTD.		
PA	(MEIJ) MEIJI SEIKA KAISHA.		
XX			
DR	WPI; 1994-147946/18.		
XX			
PT	Active peptide(s), having smooth muscle relaxing activity - useful as		
PT	bronchodilators.		

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RESULT 11
AAR87092
ID AAR87092 standard; peptide; 28 AA.
XX
AC AAR87092;
XX
DT 06-JUN-1996 (first entry)
XX
DE Vasoactive intestinal peptide, forms part of gene transfer complex.
XX
KW Porcine; VIP; cell surface receptor; ligand; gene transfer; transfection;
KW gene therapy; vaccine.
XX
OS Sus scrofa.
XX
FH Key Location/Qualifiers
FT Misc-difference 29 /note= "amidated"
FT
XX
PN EP663406-A1.
XX
PD 19-JUL-1995.
XX
PF 19-DEC-1994; 94EP-00120126.
XX
PR 20-DEC-1993; 93JP-00319815.
XX
PA (SANW ) SANWA KAGAKU KENKYUSHO CO.
XX
PI Noda H, Yamakawa H, Yoshina S, Ishida T, Tomiya N;
XX
DR WPI; 1995-247502/33.
XX
PT New modified form of vasoactive intestinal polypeptide - with C-terminal
PT substed amide residue, has greater in vivo stability and persistence,
PT useful for treating asthma and impotence.
XX
PS Disclosure; Page 3; 16pp; English.
XX
CC This sequence represents vasoactive intestinal polypeptide (VIP). VIP is
CC a peptide hormone that shows smooth muscle relaxant activity. The
CC structure of VIP is similar to that of the other peptides in the glucagon
CC -secretin family, to which it belongs. VIP is present in the nervous
CC system and the digestive system tracts. It is also found in the lungs of
CC normal patients (however, it is not found in the lungs of people
CC suffering from bronchial asthma). The sequences shown in AAR83784 and
CC AAR83786 are analogues of this sequence. These analogues are found to be
CC resistant to protease digestion. The analogues can be used to treat
CC asthma (by inhalation) and impotence (percutaneously). Compared to
CC natural VIP, the analogue sequences have better in vivo stability. The
CC analogue sequences are also more persistent than natural VIP and have
CC excellent affinity for biological membranes
XX
SQ Sequence 28 AA;
Query Match 95.8%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.9e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
RESULT 13
AAR97810
ID AAR97810 standard; peptide; 28 AA.
XX
AC AAR97810;
XX
DT 22-AUG-1996 (first entry)
XX
DE Vasoactive Intestinal Peptide VIP(1-28), for dermal ulcer treatment.
XX
KW Vasoactive intestinal peptide; VIP; vasodilation; hyperkinemic; skin;
KW burn; decubitis; diabetes; ulcer; bedsore; pressure sore.
XX
OS Synthetic.

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RESULT 12
AAR83785
ID AAR83785 standard; peptide; 28 AA.
XX
AC AAR83785;
XX
DT 06-JUN-1996 (first entry)
XX
DE Vasoactive intestinal peptide, forms part of gene transfer complex.
XX
KW Porcine; VIP; cell surface receptor; ligand; gene transfer; transfection;
KW gene therapy; vaccine.
XX
OS Sus scrofa.
XX
FH Key Location/Qualifiers
FT Misc-difference 28 /note= "amidated"
FT
XX
PN FR2719316-A1.
XX
PD 03-NOV-1995.
XX
PF 28-APR-1994; 94PR-00005174.
XX
PR 28-APR-1994; 94PR-00005174.
XX
PA (IDMI-) IDM IMMUNO-DESIGNED MOLECULES.
XX
PI Midoux P, Erbacher P, Roche-Degremont A, Moneigny M;
XX
DR WPI; 1995-375617/49.
XX
PT New nucleic acid complexes with cationic polymers - useful for genetic
PT transformation of cells.
XX
PS Claim 11; Page 43; 58pp; French.
XX
CC In novel complexes of negatively-charged nucleic acids and positively-
CC charged polymers, the polymers comprise monomer subunits bearing NH3+
CC groups, at least 10% of which are replaced by uncharged amino groups
CC bearing a substitut. that has at least one -OH group and is not recognised
CC by cell membrane receptors; the side-chain groups of the polymer (i.e.
CC the NH3+ and/or OH groups) may be substed. by a group that is recognised
CC by a cell membrane receptor, provided that at least 30% of the NH3+
CC groups remain free. The complexes are useful for transfecting particular
CC nucleic acid sequences into particular cell types, depending on the
CC identity of the cell membrane receptor ligands involved, e.g. for gene
CC therapy or prepn. of vaccines. Preferred ligands are oligoglycoside
CC antigens recognised by lectins, natural metabolites (such as biotin,
CC tetrahydrofolate, folic acid or carnitine) or peptides (pref. vasoactive
CC intestinal peptide, atrial natriuretic peptide, lipocortin, bradykinin,
CC peptide hormones such as alpha-MSH, chemotactic factors and integrin
CC ligands)
XX
SQ Sequence 28 AA;
Query Match 95.8%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.9e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
RESULT 12
AAR83785
ID AAR83785 standard; peptide; 28 AA.
XX
AC AAR83785;
XX

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XX Key Location/Qualifiers
 FT Modified-site 28 /note= "amidated"
 XX
 PN JP08040926-A.
 XX
 PD 13-FEB-1996.
 XX
 PP 03-AUG-1994; 94JP-00182457.
 XX
 PR 03-AUG-1994; 94JP-00182457.
 XX
 PA (YAKU-) YAKURIGAKU CHUO KENKYUSHO KK.
 XX
 XX WPI; 1996-157021/16.
 XX
 XX Remedy for dermal ulcer - comprises vasoactive intestinal polypeptide as
 PT active component.
 XX
 PS Claim 1; Page 2; 4pp; Japanese.
 XX
 CC Vasoactive intestinal peptide and related compounds are known to have
 CC strong vasodilatory activity. They have now been found to be effective in
 CC the treatment of skin ulcers, esp. decubitus ulcers but also burn ulcers,
 CC diabetic ulcers, etc. VIP(1-28) is the preferred peptide for use in the
 CC novel skin ulcer remedy
 XX
 XX Sequence 28 AA;
 SQ
 Query Match 95.8%; Score 138; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.9e-11;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTDNYTLRKQMRVKYLSILN 28
 |||||
 DB 1 HSDAVFTDNYTLRKQMRVKYLSILN 28
 |||||
 RESULT 14
 AAR93023
 ID AAR93023 standard; protein; 28 AA.
 XX
 AC AAR93023;
 XX
 DT 09-AUG-1996 (first entry)
 XX
 DE Human glucagon degrading enzyme - VIP substrate.
 XX
 KW Glucagon degrading enzyme; catalyst; cleavage; selectin; human; primer;
 KW vasoactive intestinal peptide; VIP; pancreatic carcinoma cell line; PCR;
 KW amplification; polymerase chain reaction; probe; expression vector;
 KW eukaryote; SV40 promoter; COS-7.
 XX
 OS Synthetic.
 XX
 XX Key Location/Qualifiers
 FT Cleavage-site 17. .18
 FT Modified-site 28 /note= "contains C-terminal amide group"
 FT
 XX JP08023972-A.
 PN
 XX 30-JAN-1996.
 PD
 XX 19-JUL-1994; 94JP-00187936.
 PF
 XX 19-JUL-1994; 94JP-00187936.
 PR
 XX (SUNR) SUNTORY LTD.
 PA
 XX WPI; 1996-133414/14.
 XX
 XX

PT New glucagon decomposing enzyme, and DNA encoding it - for specifically
 PT cleaving glucagon and vasoactive intestinal peptide, in the prevention
 PT and treatment of diseases caused by excess glucagon and VIP.
 XX
 XX Claim 1; Page 2; 18pp; Japanese.
 PS
 XX A novel gene encoding a glucagon degrading enzyme (GDE; AAT11575) was
 CC isolated from a human pancreatic carcinoma cell line HPC-YO cDNA library.
 CC The enzyme has a mol. wt. 83 kD, a pH optimum of 6.8 and catalyses the
 CC cleavage of glucagon, vasoactive intestinal peptide and selectin
 CC (AAR93022-4). The gene encoding the enzyme was isolated by screening the
 CC library with an anti-GDE peptide antibody, amplifying the inserts with
 CC the primers AAT18903-4 and probing the fragments with the probe AAT18905.
 CC This screening resulted in the full length clone designated lambda GDE4-
 CC 2. The coding region of the clone was subsequently PCR amplified by the
 CC primers AAT11576-7 and inserted into the eukaryotic expression vector
 CC PKDOR under control of the SV40 promoter for production of the protein in
 CC COS-7 cells. The protein is useful in preventing and treating diseases
 CC characterised by an excess of glucagon or vasoactive intestinal peptide
 XX
 XX Sequence 28 AA;
 SQ
 Query Match 95.8%; Score 138; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.9e-11;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTDNYTLRKQMRVKYLSILN 28
 |||||
 DB 1 HSDAVFTDNYTLRKQMRVKYLSILN 28
 |||||
 RESULT 15
 AAW65188
 ID AAW65188 standard; peptide; 28 AA.
 XX
 AC AAW65188;
 XX
 DT 02-OCT-1998 (first entry)
 XX
 DE Vasoactive intestinal peptide (VIP) analogue.
 XX
 KW Bradykinin; N-benzylglycine; agonist; receptor study; antagonist;
 KW achiral; analgesic; luteinising hormone-releasing hormone; LHRH;
 KW vasopressin; vasoactive intestinal peptide; VIP.
 XX
 OS Synthetic.
 XX
 XX Key Location/Qualifiers
 FT Modified-site 28 /note= "C-terminal amide"
 FT
 XX US5527882-A.
 PN
 XX 18-JUN-1996.
 PD
 XX 07-NOV-1994; 94US-00335202.
 PF
 XX 07-JUL-1989; 89US-00376839.
 PR
 PR 16-SEP-1992; 92US-00945664.
 XX
 XX (REGC) UNIV CALIFORNIA.
 PA
 XX Young JD, Mitchell AR;
 PI
 XX WPI; 1996-299898/30.
 DR
 XX New bradykinin analogues contg. N-benzyl-glycine - useful as bradykinin
 PT agonists or antagonists, useful e.g. as analgesics.
 XX
 XX Disclosure; Col 7-8; 15pp; English.
 PS
 XX The invention relates to the obtaining of a potent agonist or antagonist
 CC peptide by the replacement of selected amino acids with synthetic achiral
 CC

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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:08 ; Search time 21.875 Seconds
(without alignments)
105.825 Million cell updates/sec

Title: US-10-626-719-8
Perfect score: 144
Sequence: 1 HSDAVFTDNYTRLRQMKVKKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents AA:*
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3: /cgn2_6/ptodata/1/iaa/H-COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/PCTUS-COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/RE-COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	144	100.0	28	2	US-09-528-200-8
2	144	100.0	28	2	US-09-528-200-121
3	141	97.9	28	2	US-09-528-200-117
4	140	97.2	28	2	US-09-528-200-120
5	138	95.8	28	1	US-07-690-300B-1
6	138	95.8	28	1	US-07-676-987A-1
7	138	95.8	28	1	US-07-868-906-1
8	138	95.8	28	1	US-08-201-092-1
9	138	95.8	28	1	US-07-924-054-11
10	138	95.8	28	1	US-08-243-082-1
11	138	95.8	28	1	US-08-361-443-1
12	138	95.8	28	1	US-08-288-681A-1
13	138	95.8	28	1	US-07-776-272-26
14	138	95.8	28	1	US-08-308-729-1
15	138	95.8	28	1	US-08-062-472B-40
16	138	95.8	28	1	US-08-171-701A-1
17	138	95.8	28	1	US-08-741-678-1
18	138	95.8	28	1	US-08-519-180-2
19	138	95.8	28	1	US-08-414-424-1
20	138	95.8	28	1	US-08-413-708B-1
21	138	95.8	28	1	US-08-818-253-37
22	138	95.8	28	1	US-08-897-624-1
23	138	95.8	28	2	US-08-930-845-1
24	138	95.8	28	2	US-08-952-568-3
25	138	95.8	28	2	US-08-952-568-4
26	138	95.8	28	2	US-08-952-568-5
27	138	95.8	28	2	US-08-952-568-6

28	138	95.8	28	2	US-08-952-568-10	Sequence 10, Appl
29	138	95.8	28	2	US-08-952-568-11	Sequence 11, Appl
30	138	95.8	28	2	US-08-952-568-12	Sequence 12, Appl
31	138	95.8	28	2	US-08-952-568-13	Sequence 13, Appl
32	138	95.8	28	2	US-09-192-048-21	Sequence 21, Appl
33	138	95.8	28	2	US-08-893-749-2	Sequence 2, Appl
34	138	95.8	28	2	US-08-818-252-37	Sequence 37, Appl
35	138	95.8	28	2	US-09-260-846-16	Sequence 16, Appl
36	138	95.8	28	2	US-08-842-322-31	Sequence 31, Appl
37	138	95.8	28	2	US-09-333-842-1	Sequence 1, Appl
38	138	95.8	28	2	US-09-446-352B-1	Sequence 1, Appl
39	138	95.8	28	2	US-09-316-919-53	Sequence 53, Appl
40	138	95.8	28	2	US-09-630-335-1	Sequence 1, Appl
41	138	95.8	28	2	US-09-629-632A-1	Sequence 1, Appl
42	138	95.8	28	2	US-09-528-200-119	Sequence 119, App
43	138	95.8	28	2	US-09-528-200-196	Sequence 196, App
44	138	95.8	28	2	US-09-316-920A-53	Sequence 53, Appl
45	138	95.8	28	2	US-09-646-046-1	Sequence 1, Appl

ALIGNMENTS

RESULT 1
US-09-528-200-8
; Sequence 8, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528.200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 8
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-8

Query Match 100.0%; Score 144; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 5.5e-14;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HSDAVFTDNYTRLRQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTRLRQMKVKKYLSILN 28

RESULT 2
US-09-528-200-121
; Sequence 121, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN

```
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 121
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-121

Query Match          100.0%; Score 144; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 5.5e-14;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28

RESULT 3
US-09-528-200-117
; Sequence 117, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 117
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-117

Query Match          97.9%; Score 141; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28

RESULT 4
US-09-528-200-120
; Sequence 120, Application US/09528200
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; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 120
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-120

Query Match          97.2%; Score 140; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28

RESULT 5
US-07-690-300B-1
; Sequence 1, Application US/07690300B
; Patent No. 5234907
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/690,300B
; FILING DATE: 19910424
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/374,503
; FILING DATE: 30-JUN-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8480
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
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SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Sus scrofa
US-07-690-300B-1

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRLKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTLRLKQMAVKYLSILN 28

RESULT 6

US-07-676-987A-1
Sequence 1, Application US/07676987A
Patent No. 5273963

GENERAL INFORMATION:

APPLICANT: TERRY W. MOODY
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
TITLE OF INVENTION: CELL AND NONSMALL CELL LUNG CANCERS
NUMBER OF SEQUENCES: 2

CORRESPONDENCE ADDRESS:

ADDRESSEE: ROTHWELL, FIGG, ERNST & KURZ
STREET: 555 THIRTEENTH ST. N.W.
CITY: WASHINGTON
STATE: D. C.
COUNTRY: U. S.
ZIP: 20004

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/676.987A
FILING DATE: 19910329

CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:
NAME: REPPER, GEORGE R.
REGISTRATION NUMBER: 31,414
REFERENCE/DOCKET NUMBER: 1783-101
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 783-6040
TELEFAX: (202) 783-6031

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-07-676-987A-1

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRLKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTLRLKQMAVKYLSILN 28

RESULT 7

US-07-868-906-1
Sequence 1, Application US/07868906
Patent No. 5376637

GENERAL INFORMATION:

APPLICANT: Sawai, Kiichi
APPLICANT: Kuroono, Masayasu
APPLICANT: Mitani, Takahiko
APPLICANT: Sato, Makoto
APPLICANT: Takahashi, Haruo
APPLICANT: Ohwaki, Hiroyuki

TITLE OF INVENTION: PHARMACEUTICAL PREPARATION CONTAINING
TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE OR ITS ANALOGUE
NUMBER OF SEQUENCES: 3

CORRESPONDENCE ADDRESS:

ADDRESSEE: Nikaido, Marmelstein, Murray & Oram
STREET: 1725 K St. N.W. Suite 1000
CITY: Washington
STATE: D. C.
COUNTRY: USA
ZIP: 20006

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/868.906
FILING DATE: 19920416

CLASSIFICATION: 424

PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 3-90671
FILING DATE: 22-APR-1991

ATTORNEY/AGENT INFORMATION:

NAME: Oram Jr., George E.
REGISTRATION NUMBER: 27,931
REFERENCE/DOCKET NUMBER: 920238N
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 659-2930
TELEFAX: (202) 887-0357
TELEX: 440142

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-07-868-906-1

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRLKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTLRLKQMAVKYLSILN 28

RESULT 8

US-08-201-092-1
Sequence 1, Application US/08201092
Patent No. 5428015

GENERAL INFORMATION:

APPLICANT: KURONO, Masayasu
APPLICANT: MITANI, Takahiko
APPLICANT: TAKAHASHI, Haruo
APPLICANT: SAWAI, Kiichi

TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE
TITLE OF INVENTION: ANALOGUES AND USE THEREOF
NUMBER OF SEQUENCES: 4

CORRESPONDENCE ADDRESS:

ADDRESSEE: Armstrong, Nikaido, Marmelstein, Kubovcik, &
STREET: 1725 K St. N.W. Suite 1000
CITY: Washington
STATE: D. C.
COUNTRY: U. S. A.

US-08-243-082-1

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
|||||
Db 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

RESULT 11

US-08-361-443-1
; Sequence 1, Application US/08361443
; Patent No. 5521157
; GENERAL INFORMATION:
; APPLICANT: No. 5521157a, Hitoshi
; APPLICANT: Yamakawa, Hidehumi
; APPLICANT: Yoshida, Shigeaki
; APPLICANT: Ishida, Tsutomu
; APPLICANT: Tomiya, No. 5521157oru
; TITLE OF INVENTION: MODIFIED POLYPEPTIDE COMPOUND AND USE OF
; TITLE OF INVENTION: THE SAME
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: SUGHRUE, MION, ZINN, MACPEAK & SEAS
; STREET: 2100 Pennsylvania Ave.
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/361.443
; FILING DATE:
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP Hei. 5-319815
; FILING DATE: 20-DEC-1993
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-361-443-1

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
|||||
Db 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

RESULT 12

US-08-288-681A-1
; Sequence 1, Application US/08288681A
; Patent No. 5595897
; GENERAL INFORMATION:
; APPLICANT: MIDOUX, PATRICK; ERBACHER,
; APPLICANT: PATRICK; ROCHE-DEGREMONT, ANNIE-CLAUDE;
; APPLICANT: MONSIGNY, MICHEL
; TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC
; TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
; TITLE OF INVENTION: PREPARATION AND THEIR USAGE FOR TRANSFECTION
; TITLE OF INVENTION: OF CELLS

; NUMBER OF SEQUENCES: 7
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BIERMAN & MUSERLIAN
; STREET: 600 THIRD AVENUE
; CITY: NEW YORK
; STATE: NEW YORK
; COUNTRY: USA
; ZIP: 10016
; COMPUTER READABLE FORM:
; MEDIUM TYPE: FLOPPY DISK
; COMPUTER: IBM PC COMPATIBLE
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: ASCII
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/288,681A
; FILING DATE: 10-AUG-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR/94/05174
; FILING DATE: 28-APR-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: CHARLES A. MUSERLIAN
; REGISTRATION NUMBER: 19,683
; REFERENCE/DOCKET NUMBER: 410.005
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 661-8000
; TELEFAX: (212) 661-8002
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28
; TYPE: Amino Acid
; STRANDEDNESS: Unknown
; TOPOLOGY: Unknown
; MOLECULE TYPE: PEPTIDE
US-08-288-681A-1

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
|||||
Db 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

RESULT 13

US-07-776-272-26
; Sequence 26, Application US/07776272
; Patent No. 5612454
; GENERAL INFORMATION:
; APPLICANT: Kaminuma, Toshihiko
; APPLICANT: Iida, Toshii
; APPLICANT: Tajima, Masahiro
; TITLE OF INVENTION: Process for Purification of Polypeptide
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Wegner, Cantor, Mueller & Player
; STREET: 1233 20th St. N.W. P.O. Box 18218
; CITY: Washington
; STATE: District of Columbia
; COUNTRY: United States of America
; ZIP: 20036-8218
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/776,272
; FILING DATE: 19911129
; CLASSIFICATION: 530
; ATTORNEY/AGENT INFORMATION:
; NAME: Player, William E

REGISTRATION NUMBER: 31,409
REFERENCE/DOCKET NUMBER: P-450-23167
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-887-0400
TELEFAX: 202-887-0605
TELEX: 440706
INFORMATION FOR SEQ ID NO: 26:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: YES
US-07-776-272-26

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

RESULT 14

US-08-308-729-1
Sequence 1, Application US/08308729
Patent No. 5677419
GENERAL INFORMATION:
APPLICANT: Bolin, David R.
TITLE OF INVENTION: Cyclic Vasoactive Peptide
TITLE OF INVENTION: Analog
NUMBER OF SEQUENCES: 73
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hoffmann-La Roche Inc.
STREET: 340 Kingsland Street
CITY: Nutley
STATE: New Jersey
COUNTRY: USA
ZIP: 07110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/308,729
FILING DATE:
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/153,530
FILING DATE:
APPLICATION NUMBER: US 07/773,747
FILING DATE: 11-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Pokras, Bruce A.
REGISTRATION NUMBER: 32,748
REFERENCE/DOCKET NUMBER: 8322
TELECOMMUNICATION INFORMATION:
TELEPHONE: (201) 235-5801
TELEFAX: (201) 235-3500
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Sus scrofa
PUBLICATION INFORMATION:
DOCUMENT NUMBER: EP 325 044 A A

FILING DATE: 22-DEC-1987
PUBLICATION DATE: 26-JUL-1989
RELEVANT RESIDUES IN SEQ ID NO: 1: FROM 18 TO 23
US-08-308-729-1

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

RESULT 15

US-08-062-472B-40
Sequence 40, Application US/08062472B
Patent No. 5693954
GENERAL INFORMATION:
APPLICANT: Sherwood, Nancy G M
APPLICANT: Parker, David B
APPLICANT: McRory, John E
APPLICANT: Lescheid, David W
TITLE OF INVENTION: DNA ENCODING TWO FISH NEUROPEPTIDES
NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: KLARQUIST, LLP
ADDRESS: WHINSTON, LLP
STREET: ONE WORLD TRADE CENTER, SUITE 1600, 121 S.W.
CITY: PORTLAND
STATE: OREGON
COUNTRY: USA
ZIP: 97204-2988
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/062,472B
FILING DATE: 14-MAY-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: POLLEY, RICHARD J
REGISTRATION NUMBER: 28107
TELECOMMUNICATION INFORMATION:
TELEPHONE: (503) 226-7391
TELEFAX: (503) 228-9446
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-062-472B-40

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

Search completed: January 25, 2006, 15:23:44
Job time : 21.875 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:48 ; Search time 53.625 Seconds
(without alignments)
218.167 Million cell updates/sec

Title: US-10-626-719-8
Perfect score: 144
Sequence: 1 HSDAVFTDNYTLRKQMKVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA Main:
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2: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep.*
3: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep.*
4: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep.*
5: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep.*
6: /cgn2_6/ptodata/1/pubpaa/US11_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	138	95.8	28	3	US-09-929-818-1
2	138	95.8	28	3	US-09-999-745-53
3	138	95.8	28	3	US-09-554-000-37
4	138	95.8	28	4	US-10-090-109A-1
5	138	95.8	28	4	US-10-044-722-8
6	138	95.8	28	4	US-10-004-530A-17
7	138	95.8	28	4	US-10-114-716A-3
8	138	95.8	28	4	US-10-211-994-1
9	138	95.8	28	4	US-10-197-954-145
10	138	95.8	28	4	US-10-100-256B-1
11	138	95.8	28	4	US-10-254-569A-1
12	138	95.8	28	4	US-10-201-288-31
13	138	95.8	28	4	US-10-343-654-22
14	138	95.8	28	4	US-10-416-822-1
15	138	95.8	28	4	US-10-467-059-14
16	138	95.8	28	5	US-10-494-634-7
17	138	95.8	28	5	US-10-718-071-36
18	138	95.8	28	5	US-10-788-563-17
19	138	95.8	28	5	US-10-760-085-145
20	138	95.8	28	5	US-10-892-981A-1
21	138	95.8	28	5	US-10-769-803-2
22	138	95.8	28	5	US-10-919-325-32
23	138	95.8	28	5	US-10-898-143-1
24	138	95.8	28	5	US-10-930-548-3
25	138	95.8	28	5	US-10-770-712-56
26	138	95.8	28	5	US-10-799-897A-1
27	138	95.8	28	6	US-11-066-697-454

28	138	95.8	28	6	US-11-066-697-455	Sequence 455, Appl
29	138	95.8	29	4	US-10-131-543-11	Sequence 11, Appl
30	138	95.8	29	4	US-10-131-546-11	Sequence 11, Appl
31	138	95.8	29	4	US-10-131-346-11	Sequence 11, Appl
32	138	95.8	29	4	US-10-415-024-11	Sequence 11, Appl
33	138	95.8	29	6	US-11-088-596-11	Sequence 11, Appl
34	138	95.8	29	6	US-11-086-366-11	Sequence 11, Appl
35	138	95.8	30	3	US-09-929-818-203	Sequence 203, Appl
36	138	95.8	30	3	US-09-929-818-204	Sequence 204, Appl
37	138	95.8	30	3	US-09-929-818-205	Sequence 205, Appl
38	138	95.8	31	4	US-10-131-543-9	Sequence 9, Appl
39	138	95.8	31	4	US-10-131-543-10	Sequence 10, Appl
40	138	95.8	31	4	US-10-131-543-16	Sequence 16, Appl
41	138	95.8	31	4	US-10-131-546-9	Sequence 9, Appl
42	138	95.8	31	4	US-10-131-546-10	Sequence 10, Appl
43	138	95.8	31	4	US-10-131-546-16	Sequence 16, Appl
44	138	95.8	31	4	US-10-131-346-9	Sequence 9, Appl
45	138	95.8	31	4	US-10-131-346-10	Sequence 10, Appl

ALIGNMENTS

RESULT 1

US-09-929-818-1
; Sequence 1, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-929-818-1

Query Match 95.8%; Score 138; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 HSDAVFTDNYTLRKQMKVKYLSILN 28
DB 1 HSDAVFTDNYTLRKQMKVKYLSILN 28

RESULT 2

US-09-999-745-53
; Sequence 53, Application US/09999745
; Patent No. US20020157120A1
; GENERAL INFORMATION:
; APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Baird, Geoffrey
; TITLE OF INVENTION: CIRCULARLY PERMUTED FLUORESCENT PROTEIN INDICATORS
; FILE REFERENCE: REGEN1470-1
; CURRENT APPLICATION NUMBER: US/09/999,745
; CURRENT FILING DATE: 2001-10-23

; FILE REFERENCE: 241706USOPCT
; CURRENT APPLICATION NUMBER: US/10/467,059
; CURRENT FILING DATE: 2004-01-26
; PRIOR APPLICATION NUMBER: PCT/JP02/13311
; PRIOR FILING DATE: 2002-12-19
; PRIOR APPLICATION NUMBER: JP 2001-386699
; PRIOR FILING DATE: 2001-12-19
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 14
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-467-059-14

Query Match 95.8%; Score 138; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Oy 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||

Search completed: January 25, 2006, 15:31:04
Job time : 53.625 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 15:08:34 ; Search time 3.5 Seconds
(without alignments)
86.633 Million cell updates/sec

Title: US-10-626-719-8

Perfect score: 144

Sequence: 1 HSDAVFTDNTYRLRKQMRVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 75621 seqs, 10829074 residues

Total number of hits satisfying chosen parameters: 75621

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA New:

- 1: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB pep.*
- 2: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB pep.*
- 3: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB pep.*
- 4: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB pep.*
- 5: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB pep.*
- 6: /cgn2_6/ptodata/2/pubpaa/US11_NEW_PUB pep.*
- 7: /cgn2_6/ptodata/2/pubpaa/US11_NEW_PUB pep.*
- 8: /cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
1	138	95.8	28	7	US-11-175-690-352	Sequence 352, App
2	138	95.8	28	7	US-11-175-690-353	Sequence 353, App
3	138	95.8	637	7	US-11-175-690-265	Sequence 265, App
4	138	95.8	637	7	US-11-175-690-266	Sequence 266, App
5	102	70.8	636	7	US-11-175-690-240	Sequence 240, App
6	101	70.1	27	7	US-11-175-690-326	Sequence 326, App
7	101	70.1	27	7	US-11-175-690-327	Sequence 327, App
8	101	70.1	38	7	US-11-175-690-328	Sequence 328, App
9	101	70.1	38	7	US-11-175-690-329	Sequence 329, App
10	101	70.1	636	7	US-11-175-690-239	Sequence 239, App
11	101	70.1	647	7	US-11-175-690-241	Sequence 241, App
12	101	70.1	647	7	US-11-175-690-242	Sequence 242, App
13	73	50.7	636	7	US-11-175-690-278	Sequence 278, App
14	72	50.0	27	7	US-11-175-690-364	Sequence 364, App
15	72	50.0	27	7	US-11-175-690-365	Sequence 365, App
16	72	50.0	636	7	US-11-175-690-277	Sequence 277, App
17	62	43.1	30	7	US-11-112-277-30	Sequence 30, Appl
18	58	40.3	30	7	US-11-112-277-2	Sequence 2, Appl
19	57	39.6	30	7	US-11-112-277-29	Sequence 29, Appl
20	57	39.6	49	6	US-10-997-081A-26	Sequence 26, Appl
21	57	39.6	49	6	US-10-997-081A-27	Sequence 27, Appl
22	57	39.6	49	6	US-10-997-081A-28	Sequence 28, Appl
23	57	39.6	49	6	US-10-997-081A-29	Sequence 29, Appl
24	57	39.6	49	6	US-10-997-081A-30	Sequence 30, Appl
25	57	39.6	49	6	US-10-997-081A-31	Sequence 31, Appl

Sequence 32, Appl
Sequence 35, Appl
Sequence 25, Appl
Sequence 11, Appl
Sequence 18, Appl
Sequence 19, Appl
Sequence 20, Appl
Sequence 21, Appl
Sequence 22, Appl
Sequence 23, Appl
Sequence 40, Appl
Sequence 41, Appl
Sequence 10, Appl
Sequence 268, App
Sequence 354, App
Sequence 355, App
Sequence 31, Appl
Sequence 267, App
Sequence 8, Appl
Sequence 8, Appl

ALIGNMENTS

RESULT 1
US-11-175-690-352
; Sequence 352, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 352
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-352

Query Match 95.8%; Score 138; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNTYRLRKQMRVKYLSILN 28
| | | | | | | | | | | | | | | | | | | | | |
Db 1 HSDAVFTDNTYRLRKQMRVKYLSILN 28

RESULT 2
US-11-175-690-353
; Sequence 353, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:

; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 240
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-240

Query Match 70.8%; Score 102; DB 7; Length 636;
Best Local Similarity 64.3%; Pred. No. 8.7e-08;
Matches 18; Conservative 6; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMRVKKYLNSIL 28
|||:||||:|||||:|:|:
Db 25 HSDGIFTDSYRKRQMAVKKYLAAVL 52

RESULT 6
US-11-175-690-326
; Sequence 326, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 326
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-326

Query Match 70.1%; Score 101; DB 7; Length 27;
Best Local Similarity 66.7%; Pred. No. 3.4e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMRVKKYLNSIL 27
|||:||||:|||||:|:|:
Db 1 HSDGIFTDSYRKRQMAVKKYLAAVL 27

RESULT 7
US-11-175-690-327
; Sequence 327, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690

; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 327
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-327

Query Match 70.1%; Score 101; DB 7; Length 27;
Best Local Similarity 66.7%; Pred. No. 3.4e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMRVKKYLNSIL 27
|||:||||:|||||:|:|:
Db 1 HSDGIFTDSYRKRQMAVKKYLAAVL 27

RESULT 8
US-11-175-690-328
; Sequence 328, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 328
; LENGTH: 38
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-328

Query Match 70.1%; Score 101; DB 7; Length 38;
Best Local Similarity 66.7%; Pred. No. 5e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMRVKKYLNSIL 27

```
Db      1 HSDGFTDSYRKRQMAVKKYLAAVL 27
      ||| :|||:|:| ||| ||| ||| :|
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 239
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-239

Query Match      70.1%; Score 101; DB 7; Length 636;
Best Local Similarity 66.7%; Pred. No. 1.2e-07;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy      1 HSDAVFTDNTYRLRKQMRVKKYLNSIL 27
      ||| :|||:|:| ||| ||| ||| :|
Db      610 HSDGIFTDSYRKRQMAVKKYLAAVL 636

RESULT 9
US-11-175-690-329
; Sequence 329, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 329
; LENGTH: 38
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-329

Query Match      70.1%; Score 101; DB 7; Length 38;
Best Local Similarity 66.7%; Pred. No. 5e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy      1 HSDAVFTDNTYRLRKQMRVKKYLNSIL 27
      ||| :|||:|:| ||| ||| ||| :|
Db      1 HSDGIFTDSYRKRQMAVKKYLAAVL 27

RESULT 10
US-11-175-690-239
; Sequence 239, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30

US-11-175-690-241
; Sequence 241, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 241
; LENGTH: 647
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-241

Query Match      70.1%; Score 101; DB 7; Length 647;
Best Local Similarity 66.7%; Pred. No. 1.2e-07;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy      1 HSDAVFTDNTYRLRKQMRVKKYLNSIL 27
      ||| :|||:|:| ||| ||| ||| :|
Db      610 HSDGIFTDSYRKRQMAVKKYLAAVL 636

RESULT 12
US-11-175-690-242
; Sequence 242, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
```

; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 242
; LENGTH: 647
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-242

Query Match 70.1%; Score 101; DB 7; Length 647;
Best Local Similarity 66.7%; Pred. No. 1.2e-07;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMKVKYLSIL 27
| | | | | | | | | | | | | | | | | | | | | |
Db 25 HSDGIFTDSYRKQMAVKYLA 51
| | | | | | | | | | | | | | | | | | | | | |

RESULT 13
US-11-175-690-278
; Sequence 278, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 278
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-278

Query Match 50.7%; Score 73; DB 7; Length 636;
Best Local Similarity 42.9%; Pred. No. 0.0018;
Matches 12; Conservative 9; Mismatches 7; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMKVKYLSILN 28
| | | | | | | | | | | | | | | | | | | | | |
Db 25 HADGVFTSDFSKLGLQLSAKKYLESLMD 52
| | | | | | | | | | | | | | | | | | | | | |

RESULT 14
US-11-175-690-364
; Sequence 364, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 364
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-364

Query Match 50.0%; Score 72; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 6.9e-05;
Matches 12; Conservative 8; Mismatches 7; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMKVKYLSIL 27
| | | | | | | | | | | | | | | | | | | | | |
Db 1 HADGVFTSDFSKLGLQLSAKKYLESLM 27
| | | | | | | | | | | | | | | | | | | | | |

RESULT 15
US-11-175-690-365
; Sequence 365, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 365
; LENGTH: 27

; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-365

Query Match 50.0%; Score 72; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 6.9e-05;
Matches 12; Conservative 8; Mismatches 7; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMRVKYKYLNSIL 27
|:|||||::|:|||||:
Db 1 HADGVFTSDPSKLLGQLSAKYLESLM 27

Search completed: January 25, 2006, 15:31:43
Job time : 3.5 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:55:03 ; Search time 13.25 Seconds
(without alignments)
203.326 Million cell updates/sec

Title: US-10-626-719-8

Perfect score: 144

Sequence: 1 HSDAVFTDNYTRLRKQMRVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : PIR 80.*

1: pir1.*

2: pir2.*

3: pir3.*

4: pir4.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	138	95.8	28	B60071	vasoactive intesti
2	138	95.8	28	A60304	vasoactive intesti
3	138	95.8	55	VRBO	vasoactive intesti
4	138	95.8	55	VRRB	vasoactive intesti
5	138	95.8	55	VRSH	vasoactive intesti
6	138	95.8	58	VRPG	vasoactive intesti
7	138	95.8	145	A60038	vasoactive intesti
8	138	95.8	170	VRHU	vasoactive intesti
9	138	95.8	170	VRRT	vasoactive intesti
10	138	95.8	170	A60037	vasoactive intesti
11	125	86.8	55	1 VRGP	vasoactive intesti
12	123	85.4	165	1 VRCH	vasoactive intesti
13	122	84.7	28	A60303	vasoactive intesti
14	115	79.9	28	A38232	vasoactive intesti
15	112	77.8	25	2 JQ0361	vasoactive intesti
16	101	70.1	27	2 A61071	pituitary adenylat
17	101	70.1	38	2 A49165	pituitary adenylat
18	101	70.1	173	2 S34767	neuropeptides prec
19	101	70.1	175	2 A37786	pituitary adenylat
20	101	70.1	176	2 I84638	pituitary adenylat
21	101	70.1	176	2 A34044	pituitary adenylat
22	101	70.1	195	2 I50456	pituitary adenylat
23	95	66.0	38	2 A61070	pituitary adenylat
24	77	53.5	35	1 HWGHD	exendin-2 - Gila m
25	74	51.4	38	1 HWGHS	exendin-1 - Mexica
26	71	49.3	104	2 A32731	somatoliberin prec
27	70	48.6	103	2 A41410	somatoliberin prec
28	65	45.1	27	1 SECH	secretin - chicken
29	62	43.1	44	1 RHBOS	somatoliberin - bo

30	59	41.0	443	2	C70392	gamma-glutamyl pho
31	58	40.3	27	2	A27267	secretin - dog
32	57	39.6	44	1	RHPG	somatoliberin - pi
33	57	39.6	108	1	RHHUS	somatoliberin prec
34	56	38.9	27	1	S07443	secretin - human
35	56	38.9	27	1	SEBO	secretin - bovine
36	56	38.9	27	1	SESH	secretin - sheep
37	56	38.9	131	1	SEPG	secretin precursor
38	54	37.5	27	2	C60415	secretin - rabbit
39	53	36.8	31	2	S44471	glucagon G1 - Nort
40	53	36.8	133	2	JC2202	glucagon G1 - Nort
41	53	36.8	168	2	F90095	secretin precursor
42	53	36.8	532	2	B82354	hypothetical prote
43	52	36.1	29	1	GCDF	deoxycytidylate de
44	52	36.1	134	2	A40959	glucagon - smaller
45	52	36.1	180	1	GCGP	secretin precursor
						glucagon precursor

ALIGNMENTS

RESULT 1

B60071

vasoactive intestinal peptide - rhesus macaque

C;Species: Macaca mulatta (rhesus macaque)

C;Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 20-Mar-1998

C;Accession: B60071

R;Yu, J.; Xin, Y.; Eng, J.; Yalow, R.S.

Regul. Pept. 32, 39-45, 1991

A;Title: Rhesus monkey gastroenteropancreatic hormones: relationship to human sequences

A;Reference number: A60071; MUID:91164506; PMID:2003150

A;Accession: B60071

A;Status: protein sequence not shown

A;Molecule type: protein

A;Residues: 1-28 <YUA>

A;Cross-references: UNIPARC:UPI000002D1C0

A;Note: the sequence is identical with the human sequence

C;Superfamily: glucagon

C;Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 95.8%; Score 138; DB 2; Length 28;

Best Local Similarity 96.4%; Pred. No. 1.7e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMRVKYLSILN 28

Db 1 HSDAVFTDNYTRLRKQMRVKYLSILN 28

RESULT 2

A60304

vasoactive intestinal peptide - dog

N;Alternate names: VIP

C;Species: Canis lupus familiaris (dog)

C;Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change 09-Jul-2004

C;Accession: A60304

R;Eng, J.; Pan, Y.C.E.; Raufman, J.P.; Yalow, R.S.

Regul. Pept. Suppl. 3, S14, 1985

A;Title: Purification and sequencing of dog and guinea pig VIP's.

A;Reference number: A60304

A;Accession: A60304

A;Molecule type: protein

A;Residues: 1-28 <ENG>

A;Cross-references: UNIPROT:P04565; UNIPARC:UPI000002D1C0

C;Superfamily: glucagon

C;Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 95.8%; Score 138; DB 2; Length 28;

Best Local Similarity 96.4%; Pred. No. 1.7e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMRVKYLSILN 28

Db 1 HSDAVFTDNYTRLRKQMRVKYLSILN 28

Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 3

VRBO

N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
 C:Species: Bos primigenius taurus (cattle)
 C>Date: 26-Apr-1996 #sequence_revision 03-May-1996 #text_change 07-May-1999
 C:Accession: A61643; A61644; S09689
 R:Carlquist, M.; Kaiser, R.; Tatemoto, K.; Joernvall, H.; Mutt, V.
 Eur. J. Biochem. 144, 243-247, 1984
 A:Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper in
 A:Reference number: A61643; MUID:85027215; PMID:6548446
 A:Accession: A61643
 A:Molecule type: protein
 A:Residues: 1-27 <CAR>
 A:Cross-references: UNIPARC:UPI0000173515
 R:Carlquist, M.; Mutt, V.; Joernvall, H.
 FEBS Lett. 108, 457-460, 1979
 A:Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).
 A:Reference number: A61644; MUID:80092152; PMID:520589
 A:Accession: A61644
 A:Molecule type: protein
 A:Residues: 28-55 <CA2>
 A:Cross-references: UNIPARC:UPI000002D1C0
 R:Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht,
 Biochim. Biophys. Acta 1038, 355-359, 1990
 A:Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A:Reference number: S09688; MUID:90254163; PMID:2340294
 A:Contents: annotation; comparison of mammalian PHI sequences
 C:Superfamily: glucagon
 C:Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
 F:1-27/Product: peptide histidine-isoleucine #status experimental <P27>
 F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F:55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.8%; Score 138; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. NO. 3.4e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNYTLRKQMAVKKYLNSILN 55

RESULT 4

VRBB

N:Contains: intestinal peptide precursor - rabbit (fragments)
 C:Species: Oryctolagus cuniculus (domestic rabbit)
 C>Date: 03-Feb-1993 #sequence_revision 19-Apr-1996 #text_change 20-Mar-1998
 C:Accession: B60415; A60415
 R:Gossen, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht,
 Peptides 11, 123-128, 1990
 A:Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.
 A:Reference number: A60415; MUID:90259845; PMID:2342988
 A:Accession: B60415
 A:Molecule type: protein
 A:Residues: 1-27 <GOS>
 A:Cross-references: UNIPARC:UPI00000351DB
 A:Accession: A60415
 A:Molecule type: protein
 A:Residues: 28-55 <G02>
 A:Cross-references: UNIPARC:UPI00000351DB

C:Superfamily: glucagon
 C:Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
 F:1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
 F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F:55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.8%; Score 138; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. NO. 3.4e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNYTLRKQMAVKKYLNSILN 55

RESULT 5

VRSH

N:Contains: intestinal peptide precursor - sheep (fragments)
 C:Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
 C>Date: 31-Mar-1993 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
 C:Accession: B60072; A60072; C61063; A43974
 R:Boujoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.
 Regul. Pept. 32, 169-179, 1991
 A:Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A:Reference number: A60072; MUID:91239834; PMID:2034821
 A:Accession: B60072
 A:Molecule type: protein
 A:Residues: 1-27 <BOU>
 A:Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515
 A:Accession: A60072
 A:Molecule type: protein
 A:Residues: 28-55 <BO2>
 A:Cross-references: UNIPARC:UPI000002D1C0
 R:Miyata, A.; Jiang, L.; Stibbe, H.H.; Arimura, A.
 Regul. Pept. 38, 145-154, 1992
 A:Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreact
 A:Reference number: A61063; MUID:92245116; PMID:1574609
 A:Accession: C61063
 A:Molecule type: protein
 A:Residues: 28-55 <MIY>
 A:Cross-references: UNIPARC:UPI000002D1C0
 A:Experimental source: hypothalamus, intestine
 R:Garvelin, G.

Peptides 11, 703-706, 1990
 A:Title: Isolation and primary structure of VIP from sheep brain.
 A:Reference number: A43974; MUID:91045331; PMID:2235680
 A:Accession: A43974

A:Molecule type: protein
 A:Residues: 28-55 <GAF>
 A:Cross-references: UNIPARC:UPI000002D1C0
 A:Experimental source: brain

C:Superfamily: glucagon
 C:Keywords: amidated carboxyl end; brain; duplication; hormone; intestine; neuropeptide;
 F:1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
 F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F:55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.8%; Score 138; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. NO. 3.4e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNYTLRKQMAVKKYLNSILN 55

RESULT 6

VRPG

N:Contains: intestinal peptide precursor - pig (fragments)
 C:Species: Sus scrofa domestica (domestic pig)
 C>Date: 24-Apr-1994 #sequence_revision 05-Jan-1996 #text_change 09-Jul-2004
 C:Accession: A01549; A60300; A01550; JT0417; A56754; S09690
 R:Tatemoto, K.; Mutt, V.
 Proc. Natl. Acad. Sci. U.S.A. 78, 6603-6607, 1981
 A:Title: Isolation and characterization of the intestinal peptide porcine PHI (PHI-27),
 A:Reference number: A01549; MUID:82082498; PMID:6947244

R;Benson, D.L.; Isackson, P.J.; Jones, E.G. Brain Res. Mol. Brain Res. 9, 169-174, 1991

A;Title: In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey A;Reference number: A60038; MUID:91203476; PMID:1850073

A;Accession: A60038

A;Status: not compared with conceptual translation

A;Molecule type: mRNA

A;Residues: 1-145 <BEN>

A;Cross-references: UNIPROT:Q7M2Y9; UNIPARC:UPI000017662C

C;Superfamily: glucagon

C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodilation

Query Match 95.8%; Score 138; DB 2; Length 145;

Best Local Similarity 96.4%; Pred. No. 9.4e-13;

Matches 27; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMEVKYKLYNSILN 28
|||||
Db 100 HSDAVFTDNYTLRKQMAVKYKLYNSILN 127
|||||

RESULT 8

VRHU

N;Alternate names: VIP precursor

N;Contains: peptide histidine-methionine (PHM-27); peptide histidine-valine (PHV-42); va

C;Species: Homo sapiens (man)

C;Date: 14-Nov-1983 #sequence revision 14-Nov-1983 #text change 09-Jul-2004

C;Accession: A23296; A93313; A60205; A26361; A27419; JH0618; I51955; I56494; A01

R;Tsukada, T.; Horovitch, S.J.; Montminy, M.R.; Mandel, G.; Goodman, R.H.

DNA 4, 293-300, 1985

A;Title: Structure of the human vasoactive intestinal polypeptide gene.

A;Reference number: A90952; MUID:86004065; PMID:3899557

A;Accession: A23296

A;Molecule type: DNA

A;Residues: 1-170 <TSU>

A;Cross-references: UNIPROT:P01282; UNIPARC:UPI000003B343; GB:M11553; NID:g340243; PIDN:

A;Note: the authors translated the codon GAA for residue 48 as Gln

R;Itoh, N.; Obata, K.; Yanaihara, N.; Okamoto, H.

Nature 304, 547-549, 1983

A;Title: Human preprovasoactive intestinal polypeptide contains a novel PHI-27-like pept

A;Reference number: A93313; MUID:83271523; PMID:6571696

A;Accession: A93313

A;Molecule type: mRNA

A;Residues: 1-170 <ITO>

A;Cross-references: UNIPARC:UPI000003B343; GB:L00157; GB:J00320; NID:g340277; PIDN:AAA61

R;Gozes, I.; Giladi, E.; Shani, Y.

J. Neurochem. 48, 1136-1141, 1987

A;Title: Vasoactive intestinal peptide gene: putative mechanism of information storage a

A;Reference number: A60205; MUID:87140054; PMID:2434617

A;Accession: A60205

A;Molecule type: mRNA

A;Residues: 78-155 <GOZ>

A;Cross-references: UNIPARC:UPI000016B2F8; GB:M31645; GB:M32162; NID:g340250; PIDN:AAA61

A;Note: this abundant mRNA found from a human buccal tumor line contains an unspliced intron

R;Linder, S.; Barthelm, T.; Norberg, A.; Persson, H.; Schalling, M.; Hockfelt, T.; Magnus

Proc. Natl. Acad. Sci. U.S.A. 84, 605-609, 1987

A;Title: Structure and expression of the gene encoding the vasoactive intestinal peptide

A;Reference number: A26361; MUID:87092456; PMID:3025882

A;Accession: A26361

A;Molecule type: DNA

A;Residues: 1-115, 'L', 117-135, 'G', 137-170 <LIN>

A;Cross-references: UNIPARC:UPI000016B2FA; GB:M14623; NID:g340271; PIDN:AAA61288.1; PID:

A;Note: the authors translated the codon TTA for residue 116 as Ser and GGC for residue

R;Yiangou, Y.; Di Marzo, V.; Spokes, R.A.; Panico, M.; Morris, H.R.; Bloom, S.R.

J. Biol. Chem. 262, 14010-14013, 1987

A;Title: Isolation, characterization, and pharmacological actions of peptide histidine v

A;Reference number: A27419; MUID:88007645; PMID:3654650

A;Accession: A27419

A;Molecule type: protein

A;Residues: 81-122 <YIA>

A;Cross-references: UNIPARC:UPI00000351DE

R;Kitamura, K.; Kangawa, K.; Kawamoto, M.; Ichiki, Y.; Matsuo, H.; Eto, T.

```
Biochem. Biophys. Res. Commun. 185, 134-141, 1992
A>Title: Isolation and characterization of peptides which act on rat platelets, from a p
A/Reference number: JH0618; MUID:92287083; PMID:1318039
A/Accession: JH0618
A/Molecule type: protein
A/Residues: 125-152 <KIT>
A/Cross-references: UNIPARC:UPI000002D1C0
A/Experimental source: picrochromocoma
R/Amagami, T.; Ohawa, K.; Nishizawa, M.; Inoue, C.; Gotoh, E.; Yanaihara, N.; Yamamoto
Ann. N. Y. Acad. Sci. 527, 87-102, 1988
A>Title: Complete nucleotide sequence of human vasoactive intestinal peptide/PHM-27 gene
A/Reference number: I51955; MUID:88267775; PMID:2839091
A/Accession: I51955
A/Status: translated from GB/EMBL/DBJ
A/Molecule type: DNA
A/Residues: 1-170 <RES>
A/Cross-references: UNIPARC:UPI000003B343; GB:M33027; NID:g340253; PIDN:AAA69515.1; PID:
R/Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 47, 1136-1141, 1987
A>Title: Vasoactive intestinal peptide gene: Putative mechanism of information storage a
A/Reference number: I56494
A/Accession: I56494
A/Status: preliminary; translated from GB/EMBL/DBJ
A/Molecule type: DNA
A/Residues: 78-155 <RE2>
A/Cross-references: UNIPARC:UPI000016B2F8; GB:M32162; NID:g340250; PIDN:AAA61285.1; PID:
R/Blom, S.R.; Christofides, N.D.; Delamarter, J.; Buell, G.; Kawashima, E.; Polak, J.M.
Lancet 2, 1163-1165, 1983
A>Title: Diarrhoea in vipoma patients associated with cosecretion of a second active pep
A/Reference number: I56988; MUID:84066682; PMID:6139527
A/Accession: I56988
A/Status: preliminary; translated from GB/EMBL/DBJ
A/Molecule type: mRNA
A/Residues: 50-170 <RE3>
A/Cross-references: UNIPARC:UPI000016B2F7; GB:IM54930; NID:g340247; PIDN:AAA63268.1; PID:
C/Genetics:
A/Gene: GDB:VIP
A/Cross-references: GDB:120490; OMIM:192320
A/Map position: 6q26-6q27
A/Introns: 36/2; 77/2; 112/2; 156/2
C/Superfamily: glucagon
C/Keywords: amidated carboxyl end; duplication; glycoprotein; hormone; intestine; neurop
F/81-120/Domain: signal sequence #status predicted <SIG>
F/81-122/Product: peptide histidine-valine (PHV-42) #status experimental <PHV>
F/81-107/Product: peptide histidine-methionine (PHM-27) #status experimental <PHM>
F/125-152/Product: vasoactive intestinal peptide #status experimental <VIP>
F/168.133/Binding site: carbohydrate (Asn) (covalent) #status predicted
F/107/Modified site: amidated carboxyl end (Met) (amide in mature form from following gl
F/152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl

Query Match 95.8%; Score 138; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
DB 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

RESULT 9
VRRT
vasoactive intestinal peptide precursor - rat
N/Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C/Species: Rattus norvegicus (Norway rat)
C/Date: 28-Feb-1986 #sequence_revision 30-Jun-1993 #text_change 09-Jul-2004
A/Accession: A60053; B60037; A01548; A28102; A60586; A60587; S09691
R/Giladi, E.; Shani, Y.; Gozes, I.
Brain Res. Mol. Brain Res. 7, 261-267, 1990
A>Title: The complete structure of the rat VIP gene.
A/Reference number: A60053; MUID:90244869; PMID:2159586
A/Accession: A60053
A/Molecule type: DNA
A/Residues: 1-170 <GIL>
```

```
A/Cross-references: UNIPROT:P01283; UNIPARC:UPI000013884A
A/Note: the authors translated the codon GAG for residue 67 as Gin
R/Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A>Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A/Reference number: A60037; MUID:91232388; PMID:1851524
A/Accession: B60037
A/Status: not compared with conceptual translation
A/Molecule type: DNA
A/Residues: 78-155 <LAM>
A/Cross-references: UNIPARC:UPI00000173511
R/Nishizawa, M.; Hayakawa, Y.; Yanaihara, N.; Okamoto, H.
FEBS Lett. 183, 55-59, 1985
A>Title: Nucleotide sequence divergence and functional constraint in VIP precursor mRNA
A/Reference number: A01548; MUID:85154612; PMID:3838518
A/Accession: A01548
A/Molecule type: mRNA
A/Residues: 9-170 <NTS>
A/Cross-references: UNIPARC:UPI0000170BA3; GB:X02341; NID:g57481; PIDN:CAA26200.1; PID:g
A/Experimental source: cerebral cortex
R/Goetzl, E.J.; Sreedharan, S.P.; Turck, C.W.
J. Biol. Chem. 263, 9083-9086, 1988
A>Title: Structurally distinctive vasoactive intestinal peptides from rat basophilic leu
A/Reference number: A28102; MUID:98243784; PMID:3379062
A/Accession: A28102
A/Molecule type: protein
A/Residues: 134-152 <GOE>
A/Cross-references: UNIPARC:UPI00000351E4
A/Note: the source of this novel short form of VIP was rat basophilic leukemia cells
R/Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Rathe, J.; Robberecht, P.; Chris
Endocrinology 125, 1296-1302, 1989
A>Title: Peptide histidine isoleucineamide (PHI)-(1-27)-Gly as a new major form of PHI in
A/Reference number: A60586; MUID:89338237; PMID:2759027
A/Accession: A60586
A/Molecule type: protein
A/Residues: 81-108 <CAU>
A/Cross-references: UNIPARC:UPI0000173512
R/Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Robberecht, P.; Christophe, J.
Endocrinology 125, 2645-2655, 1989
A>Title: Variable distribution of three molecular forms of peptide histidine isoleucineam
A/Reference number: A60587; MUID:90005222; PMID:2792003
A/Accession: A60587
A/Molecule type: protein
A/Residues: 81-122 <CA2>
A/Cross-references: UNIPARC:UPI0000173513
R/Buscaill, L.; Cauvin, A.; Gourlet, P.; Gossens, D.; de Neef, P.; Rathe, J.; Robberecht,
Biochim. Biophys. Acta 1038, 355-359, 1990
A>Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A/Reference number: S09688; MUID:90254163; PMID:2340294
A/Contents: annotation; comparison of mammalian PHI sequences
C/Comment: Two active peptides are released from the VIP precursor by cleavage at paired
C/Genetics:
A/Introns: 36/2; 77/2; 156/2
C/Superfamily: glucagon
C/Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
F/81-122/Product: PHI-42 #status predicted <SIG>
F/81-107/Product: PHI-27-Gly #status experimental <PHG>
F/81-108/Product: peptide histidine-isoleucine (PHI-27) #status predicted <PHI>
F/125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F/107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
F/113/Binding site: carbohydrate (Asn) (covalent) #status predicted
F/152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl

Query Match 95.8%; Score 138; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
DB 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152
```


C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasod
F;1-27/Product: peptide histidine-isoleucine #status experimental <p27>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;217/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 86.8%; Score 125; DB 1; Length 55;
Best Local Similarity 82.1%; Pred. No. 2.6e-11;
Matches 23; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMRVKYLSILN 28
|||:|||||:|||||:|||||:|
Db 28 HSDALFTDTYTLRKQMAVKYLSVLN 55
|||:|||||:|||||:|||||:|

RESULT 12
VRCH
vasoactive intestinal peptide precursor - chicken
C;Species: Gallus gallus (Chicken)
C;Date: 24-Apr-1984 #sequence revision 10-Nov-1995 #text_change 09-Jul-2004
C;Accession: S47470; A91425; A90720; A01551
R;Talbot, R.T.; Dunn, I.C.; Wilson, P.W.; Sang, H.M.; Sharp, P.J.
submitted to the EMBL Data Library, August 1994
A;Description: Evidence for alternative splicing of the chicken VIP gene.
A;Reference number: S47470
A;Accession: S47470
A;Molecule type: mRNA
A;Residues: 1-165 <NAL>
A;Cross-references: UNIPROT:P48143; UNIPARC:UPI000002B6C3; EMBL:X80906; NID:G531364; PID
FEBS Lett. 60, 322-326, 1975
A;Title: Structure of the vasoactive intestinal octacosapeptide from chicken intestine.
A;Reference number: A91425; MUID:76210823; PMID:1227973
A;Accession: A91425
A;Molecule type: protein
A;Residues: 94-121 <Nfr>
A;Cross-references: UNIPARC:UPI0000035E1
R;Bodanszky, M.; Lin, C.Y.; Yiotakis, A.E.; Mutt, V.; Said, S.I.
Bioorg. Chem. 5, 339-350, 1976
A;Title: Vasoactive intestinal peptide (VIP) from chicken. Synthesis and properties of t
A;Reference number: A90720
A;Contents: synthesis
A;Accession: A90720
A;Molecule type: protein
A;Residues: 107-121 <BOD>
A;Cross-references: UNIPARC:UPI0000173517
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; neuropeptide
F;1-25/Domain: signal sequence #status predicted <SIG>
F;94-121/Product: vasoactive intestinal peptide #status experimental <MAT>
F;121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following gl

Query Match 85.4%; Score 123; DB 1; Length 165;
Best Local Similarity 85.2%; Pred. No. 1.6e-10;
Matches 23; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMRVKYLSILN 27
|||:|||||:|||||:|||||:|
Db 94 HSDALFTDTYTLRKQMAVKYLSVLN 120
|||:|||||:|||||:|||||:|

RESULT 13
A60303
vasoactive intestinal peptide - smaller spotted catshark
C;Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish)
C;Date: 10-Nov-1992 #sequence revision 10-Nov-1992 #text_change 09-Jul-2004
C;Accession: A60303; A60314; S07432
R;Dimoline, R.; Thwaites, D.T.; Young, J.; Lee, C.M.; Thorndyke, M.C.
Regul. Pept. 18, 356, 1987
A;Title: A novel family of VIP-like peptides from the dogfish Scyliorhinus canicula.
A;Reference number: A60303
A;Accession: A60303

A:Molecule type: protein
A:Residues: 1-28 <DIM>
A:Cross-references: UNIPROT:P09685; UNIPARC:UPI000013884B
A>Note: this reference is an abstract
R:Dimaline, R.; Thorndyke, M.C.; Young, J.
Regul. Pept. 14, 1-10, 1986
A:Title: Isolation and partial sequence of elasmobranch VIP.
A:Reference number: A60314; MUID:86234323; PMID:3715063
A:Accession: A60314
A:Molecule type: protein
A:Residues: 1-10 <DI2>
A:Cross-references: UNIPARC:UPI000017662D
R:Dimaline, R.; Young, J.; Thwaites, D.T.; Lee, C.M.; Thorndyke, M.C.
Ann. N. Y. Acad. Sci. 527, 621-623, 1988
A:Title: Amino acid sequence of a biologically active vasoactive intestinal peptide from F.28/Modified site: amidated carboxyl end (Ala) #status experimental
A:Reference number: S07432
A:Accession: S07432
A>Status: preliminary
A:Molecule type: protein
A:Residues: 1-28 <DI3>
A:Cross-references: UNIPARC:UPI000013884B
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; intestine; neuropeptide
F:28/Modified site: amidated carboxyl end (Ala) #status experimental

Query Match 84.7%; Score 122; DB 2; Length 28;
Best Local Similarity 81.5%; Pred. No. 3.5e-11;
Matches 22; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMRVKYKYLNSIL 27
|||||:|||||:|||||:|||||:|||||
Db 1 HSDAVFTDNYSLRKQMRVKYKYLNSLL 27

RESULT 14
A38232
vasoactive intestinal peptide - North American opossum
N:Alternate names: VIP
C:Species: Didelphis virginiana, Didelphis marsupialis virginiana (North American opossum)
C>Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004
A:Accession: A38232
R:Eng, J.; Yu, J.; Rattan, S.; Yalow, R.S.
Proc. Natl. Acad. Sci. U.S.A. 89, 1809-1811, 1992
A:Title: Isolation and amino acid sequences of opossum vasoactive intestinal polypeptide
A:Reference number: A38232; MUID:92179271; PMID:1542675
A:Accession: A38232
A>Status: preliminary
A:Molecule type: protein
A:Residues: 1-28 <ENG>
A:Cross-references: UNIPROT:P39089; UNIPARC:UPI0000138846
A>Note: sequence extracted from NCBI backbone (NCBIP:87215)
C:Superfamily: glucagon
C:Keywords: duplication; intestine; neuropeptide

Query Match 79.9%; Score 115; DB 2; Length 28;
Best Local Similarity 78.6%; Pred. No. 3.7e-10;
Matches 22; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMRVKYKYLNSILN 28
|||||:|||||:|||||:|||||:|||||
Db 1 HSDAVFTDYSYTRLLKQMRVKYKYLNSILN 28

RESULT 15
JQ0361
vasoactive intestinal peptide - Atlantic cod (fragment)
C:Species: Gadus morhua (Atlantic cod)
C>Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 09-Jul-2004
A:Accession: JQ0361
R:Thwaites, D.T.; Young, J.; Thorndyke, M.C.; Dimaline, R.
Regul. Pept. 21, 436, 1988
A:Title: Isolation and characterisation of two teleost VIP's.
A:Reference number: JQ0361

A:Accession: JQ0361
A:Molecule type: protein
A:Residues: 1-25 <THW>
A:Cross-references: UNIPROT:P09684; UNIPARC:UPI0000138847
C:Superfamily: glucagon
C:Keywords: duplication; intestine; neuropeptide

Query Match 77.8%; Score 112; DB 2; Length 25;
Best Local Similarity 84.0%; Pred. No. 8.9e-10;
Matches 21; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMRVKYKYLNS 25
|||||:|||||:|||||:|||||:|||||
Db 1 HSDAVFTDNYSLRKQMRVKYKYLNS 25

Search completed: January 25, 2006, 15:20:38
Job time : 13.25 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:54:02 ; Search time 76 Seconds
(without alignments)
259.931 Million cell updates/sec

Title: US-10-626-719-8

Perfect score: 144

Sequence: 1 HSDAVFTDNYTLRKQMKRVKYLNSILN 28

Scoring table:

BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

UniProt_05.80.*

1: uniprot_sprot.*

2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	138	95.8	28	1 VIP_CANFA	P63289 canis famil
2	138	95.8	28	1 VIP_CAPHI	P63290 capra hircu
3	138	95.8	28	1 VIP_MACMU	P84488 macaca mula
4	138	95.8	28	1 VIP_SHEEP	P63291 ovis aries
5	138	95.8	72	1 VIP_PIG	P01284 sus scrofa
6	138	95.8	72	1 VIP_RABIT	P32649 oryctolagus
7	138	95.8	118	2 QSTCY7_HUMAN	Q8tcy7 homo sapien
8	138	95.8	145	2 Q7M2Y9_MACFA	Q7m2y9 macaca fasc
9	138	95.8	153	2 Q7TSR4_GMURI	Q7tsr4 arvicanthis
10	138	95.8	169	2 Q8TCY8_HUMAN	Q8tcy8 homo sapien
11	138	95.8	170	1 VIP_BOVIN	P81401 bos taurus
12	138	95.8	170	1 VIP_HUMAN	P01282 homo sapien
13	138	95.8	170	1 VIP_MOUSE	P32648 mus musculu
14	138	95.8	170	1 VIP_RAT	P01283 rattus norv
15	138	95.8	170	2 Q8TCY9_HUMAN	Q8tcy9 homo sapien
16	138	95.8	171	2 Q9D2Z7_MOUSE	Q9d2z7 mus musculu
17	125	86.8	72	1 VIP_CAVPO	P04566 cavia porce
18	123	85.4	28	1 VIP_ALLMI	P48142 alligator m
19	123	85.4	28	1 VIP_RANRI	P81016 rana ridibu
20	123	85.4	70	2 Q4TZK3_ANAPL	Q4tzk3 anas platyr
21	123	85.4	86	2 Q4TZY9_ASAER	Q4tzy9 anser anser
22	123	85.4	200	1 VIP_CHICK	P48143 gallus gall
23	123	85.4	200	1 VIP_MELGA	P45644 meleagris g
24	123	85.4	202	2 Q7ZYGB_XENLA	Q7zygb xenopus lae
25	122	84.7	28	1 VIP_SCYCA	P09685 scylliorhinu
26	122	84.7	28	2 Q9PR19_AMICA	Q9pr19 amia calva
27	122	84.7	147	2 Q4SQN2_TETNG	Q4sqn2 tetraodon n
28	118	81.9	28	2 Q9PRN8_CARAU	Q9prn8 carassius a
29	115	79.9	28	1 VIP_DIDMA	P39089 didelphis m
30	112	77.8	25	1 VIP_GADMO	P09684 gadus morhua
31	105	72.9	38	2 Q75W85_MISAN	Q75w85 misgurnus a

32	102	70.8	172	2 Q9DE29_BRARE	Q9de29 brachydanio
33	102	70.8	199	2 Q5XJ29_BRARE	Q5xj29 brachydanio
34	101	70.1	38	2 Q75W94_HALRO	Q75w94 halocynthia
35	101	70.1	38	2 Q8IU36_PERAM	Q8iu36 periplaneta
36	101	70.1	38	2 Q8IU37_SEPLE	Q8iu37 sepioteuthi
37	101	70.1	38	2 Q8IU38_HVDMA	Q8iu38 hydra magni
38	101	70.1	38	2 Q8IU39_DUGJA	Q8iu39 dugesia jap
39	101	70.1	38	2 Q75W87_ONCMY	Q75w87 oncorhynch
40	101	70.1	38	2 Q75W90_9TELE	Q75w90 sardinops m
41	101	70.1	38	2 Q75W92_9PERC	Q75w92 stephanolep
42	101	70.1	38	2 Q8AYP4_ACISC	Q8ayp4 acipenser s
43	101	70.1	38	2 Q8AYP5_TRAJP	Q8ayp5 trachurus j
44	101	70.1	62	2 Q53BI2_9PRIM	Q53bi2 gorilla gor
45	101	70.1	62	2 Q53BI3_PONPY	Q53bi3 pongo pygma

ALIGNMENTS

RESULT 1

ID	VIP_CANFA	STANDARD;	PRT;	28 AA.
AC	P63289; P04565;			
DT	13-AUG-1987 (Rel. 05, Created)			
DT	13-AUG-1987 (Rel. 05, Last sequence update)			
DT	13-SEP-2005 (Rel. 48, Last annotation update)			
DE	Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide).			
DE	Name:VIP;			
OS	Canis familiaris (Dog).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Euthera; Laurasiatheria; Carnivora; Fissipedia; Canidae;			
OC	Canis.			
OX	NCBI_TaxID=9615;			
RN	[1]			
RP	PROTEIN SEQUENCE.			
RX	MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;			
RA	Eng J.; Du B.-H.; Raufman J.-P.; Yalow R.S.;			
RT	"Purification and amino acid sequences of dog, goat and guinea pig VIPs.";			
RL	Peptides 7 Suppl. 1:17-20(1986).			
CC	-!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.			
CC	-!- SUBCELLULAR LOCATION: Secreted.			
CC	-!- SIMILARITY: Belongs to the glucagon family.			
CC	This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.			
CC	PIR; A60304; A60304.			
DR	HSSP; P18509; IGEA.			
DR	Ensembl; ENSCAFG0000000538; Canis familiaris.			
DR	InterPro; IPR000532; Glucagon.			
DR	Pfam; PF00123; Hormone_2; 1.			
DR	PRINTS; PR00275; GLUCAGON.			
DR	SMART; SM00070; GLUCA; 1.			
DR	PROSITE; PS00260; GLUCAGON; 1.			
KW	Amidation; Direct protein sequencing; Glucagon family; Hormone.			
FT	MOD RSS 28 28 Asparagine amide.			
SQ	SEQUENCE 28 AA; 3327 MW; EF313P8573PF6F3F CRC64;			

Query Match 95.8%; Score 138; DB 1; Length 28;

Best Local Similarity 96.4%; Pred. No. 1.3e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKRVKYLNSILN 28

|||||

1 HSDAVFTDNYTLRKQMKRVKYLNSILN 28

|||||

RL Regul. Pept. 38:145-154(1992).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC removed.
CC -----
DR PIR; B60072; VRSH.
DR HSSP; P18509; IGEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD RES 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

RESULT 5
VIP_PIG
ID VIP_PIG STANDARD; PRT; 72 AA.
AC P01284; QSTRN0;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
DE (Vasoactive intestinal polypeptide)] (Fragment).
GN Name=VIP;
OS Sus scrofa (Pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
OC Sus.
OX NCBI_TaxID=9823;
RN [1]
RP PROTEIN SEQUENCE OF 1-27.
RX MEDLINE=82082498; PubMed=6947244;
RA Tatamoto K., Mutt V.;
RT "Isolation and characterization of the intestinal peptide porcine PHI
RT (PHI-27), a new member of the glucagon-secretin family.";
RL Proc. Natl. Acad. Sci. U.S.A. 78:6603-6607(1981).
RN [2]
RP PROTEIN SEQUENCE OF 1-24.
RC TISSUE=Duodenum;
RX MEDLINE=93038640; PubMed=1329741;
RA Ichiki Y., Kitamura K., Kangawa K., Kawamoto M., Matsuo H., Eto T.;
RA "Organ distribution and characterization of porcine peptides (VIP,
RT CGRP and PHI) that increase cAMP in rat platelets";
RL Biochem. Biophys. Res. Commun. 187:1587-1593(1992).
RN [3]
RP PROTEIN SEQUENCE OF 28-58.
RX MEDLINE=88335763; PubMed=2843830; DOI=10.1016/0196-9781(88)90149-0;
RA Gavvelin G., Andersson M., Dimoline R., Jornvall H., Mutt V.;
RT "Isolation and characterization of a variant form of vasoactive
RT intestinal polypeptide";
RL Peptides 9:469-474(1988).
RN [4]
RP PROTEIN SEQUENCE OF 45-72.

RX MEDLINE=74167323; PubMed=4829446;
RA Mutt V., Said S.I.;
RT "Structure of the porcine vasoactive intestinal octacosapeptide. The
RT amino-acid sequence. Use of kallikrein in its determination.";
RL Eur. J. Biochem. 42:581-589(1974).
RN [5]
RP SYNTHESIS OF VIP.
RX MEDLINE=74308014; PubMed=4854585;
RA Bodanszky M., Klausner Y.S., Lin C.Y., Mutt V., Said S.I.;
RT "Synthesis of the vasoactive intestinal peptide (VIP).";
RL J. Am. Chem. Soc. 96:4973-4978(1974).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR PIR; A01549; VRPG.
DR HSSP; P18509; IGEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone.
FT PEPTIDE 1 27 Intestinal peptide PHI-27.
FT MOD RES 45 72 Vasoactive intestinal peptide.
FT MOD RES 27 72 Isoleucine amide.
FT MOD RES 72 72 Asparagine amide.
FT NON_TER 1 1
FT NON_TER 72 72
SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0B5C1CA3A CRC64;

Query Match 95.8%; Score 138; DB 1; Length 72;
Best Local Similarity 96.4%; Pred. No. 3.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
Db 45 HSDAVFTDNYTLRKQMKVKKYLSILN 72

RESULT 6
VIP_RABIT
ID VIP_RABIT STANDARD; PRT; 72 AA.
AC P32649;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
DE (Vasoactive intestinal polypeptide)] (Fragment).
GN Name=VIP;
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
OC Oryctolagus.
OX NCBI_TaxID=9986;
RN [1]
RP PROTEIN SEQUENCE.
RC TISSUE=Small intestine;
RX MEDLINE=90259845; PubMed=2342988; DOI=10.1016/0196-9781(90)90120-T;
RA Gossen D., Buscail L., Cauvin A., Gourlet P., de Neef P., Rache J.,
RA Robberecht P., Vandermeers-Piret M.C., Vandermeers A., Christophe J.;

"Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.";
 RT Peptides 11:123-128(1990).
 RL
 CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC
 CC -1- FUNCTION: PHI also causes vasodilation.
 CC
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC
 CC -1- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
 CC with the human precursor sequence.
 CC
 CC -1- SIMILARITY: Belongs to the glucagon family.
 CC
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
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 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC
 CC HSSP; P18509; IGEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 KW Amidation; Cleavage on pair of basic residues;
 KW Direct protein sequencing; Glucagon family; Hormone.
 FT PEPTIDE 1 27
 FT 1 27 Intestinal peptide PHI-27.
 FT MOD_RES 45 72 Vasoactive intestinal peptide.
 FT MOD_RES 27 27 Isoleucine amide.
 FT MOD_RES 72 72 Asparagine amide.
 FT NON_TER 1 1
 FT NON_TER 72 72
 SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0B5C1CA3A CRC64;
 Query Match 95.8%; Score 138; DB 1; Length 72;
 Best Local Similarity 96.4%; Pred. No. 3.4e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
 DB 45 HSDAVFTDNYTLRKQMKVKKYLSILN 72
 RESULT 7
 Q5TCY7 HUMAN
 ID Q5TCY7 HUMAN PRELIMINARY; PRT; 118 AA.
 AC Q5TCY7;
 DT 01-FEB-2005 (TrEMBLrel. 29, Created)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
 DE Vasoactive intestinal peptide (Fragment).
 GN Name=VIP; ORFNames=RP4-546K19.1-003;
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
 OC Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RA Johnson C.;
 RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AL133356; CAI21766.1; -; Genomic DNA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR SMART; SM00070; GLUC; 2.
 DR PROSITE; PS00260; GLUCAGON; 2.
 FT NON_TER 1 1
 SQ SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;
 Query Match 95.8%; Score 138; DB 2; Length 118;
 Best Local Similarity 96.4%; Pred. No. 5.7e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
 DB 74 HSDAVFTDNYTLRKQMKVKKYLSILN 101
 RESULT 8
 Q7M2Y9 MACFA
 ID Q7M2Y9 MACFA PRELIMINARY; PRT; 145 AA.
 AC Q7M2Y9;
 DT 01-MAR-2004 (TrEMBLrel. 26, Created)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
 DE Vasoactive intestinal peptide precursor (Fragment).
 OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
 CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 CC Cercopithecidae; Cercopitheciinae; Macaca.
 OX NCBI_TaxID=9541;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=91203476; PubMed=1850073; DOI=10.1016/0169-328X(91)90145-N;
 RA Benson D.L.; Isackson P.J.; Jones E.G.;
 RT "In situ hybridization reveals VIP precursor mRNA-containing neurons
 RT in monkey and rat neocortex."
 RL Brain Res. Mol. Brain Res. 9:169-174(1991).
 DR PIR; A60038; A60038.
 DR HSSP; P18509; IGEA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 FT NON_TER 1 1
 FT NON_TER 145 145
 SQ SEQUENCE 145 AA; 16324 MW; 1ABE5D98D853FE5C CRC64;
 Query Match 95.8%; Score 138; DB 2; Length 145;
 Best Local Similarity 96.4%; Pred. No. 7.1e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
 DB 100 HSDAVFTDNYTLRKQMKVKKYLSILN 127
 RESULT 9
 Q7TSR4 9MURI
 ID Q7TSR4 9MURI PRELIMINARY; PRT; 153 AA.
 AC Q7TSR4;
 DT 01-OCT-2003 (TrEMBLrel. 25, Created)
 DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
 DE Vasoactive intestinal polypeptide (Fragment).
 OS Arvicanthia ansorgei.
 CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
 CC Muridae; Murinae; Arvicanthis.
 OX NCBI_TaxID=204747;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RA Dardente H.; Menet J.S.; Tournier B.B.; Challet E.; Pevet P.;
 RA Masson-Pevet M.;
 RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AY225375; AAP15167.1; -; mRNA.
 DR HSSP; P18509; IGEA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.

```
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON TER 1
SQ SEQUENCE 153 AA; 17171 MW; 9C15095D6E147A15 CRC64;

Query Match 95.8%; Score 138; DB 2; Length 153;
Best Local Similarity 96.4%; Pred. No. 7.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
    |||||
Db 108 HSDAVFTDNYTLRKQMKVKKYLSILN 135
    |||||

RESULT 10
QSTCY8 HUMAN
ID QSTCY8 HUMAN PRELIMINARY; PRT; 169 AA.
AC QSTCY8;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-002;
OS Homo sapiens (Human);
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CAI21765.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 169 AA; 19081 MW; F325BDFEFA7132C3 CRC64;

Query Match 95.8%; Score 138; DB 2; Length 169;
Best Local Similarity 96.4%; Pred. No. 8.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
    |||||
Db 124 HSDAVFTDNYTLRKQMKVKKYLSILN 151
    |||||

RESULT 11
VIP_BOVIN
ID -VIP BOVIN STANDARD; PRT; 170 AA.
AC P81401; Q8MI77;
DT 15-DEC-1998 (Rel. 37, Created)
DT 25-OCT-2004 (Rel. 45, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHI-27 (Peptide
DE histidine isoleucinamide 27); Vasoactive intestinal peptide (VIP)
DE (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Bos taurus (Bovine);
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Hamelink C., Lee H.-W., Chen Y., Grimaldi M., Biden L.E.;
RX MEDLINE=22092342; PubMed=12097482;
RT "Coincident elevation of cAMP and calcium influx by PACAP-27
RT synergistically regulates vasoactive intestinal polypeptide gene
RT transcription through a novel PKA-independent signaling pathway.";
RL J. Neurosci. 22:5310-5320(2002).
RN [2]
RP PROTEIN SEQUENCE OF 81-107.
RC TISSUE=Duodenum;
```

```
RX MEDLINE=85027215; PubMed=6548446;
RA Carlquist M., Kaiser R., Tatemoto K., Joernvall H., Mutt V.;
RT "A novel form of the polypeptide PHI isolated in high yield from
RT bovine upper intestine. Relationships to other peptides of the
RT glucagon-secretin family.";
RL Eur. J. Biochem. 144:243-247(1984).
RN [3]
RP PROTEIN SEQUENCE OF 125-152.
RC TISSUE=Intestine;
RX MEDLINE=80092152; PubMed=520589; DOI=10.1016/0014-5793(79)80587-6;
RA Carlquist M., Mutt V., Joernvall H.;
RT "Isolation and characterization of bovine vasoactive intestinal
RT peptide (VIP).";
RL FEBS Lett. 108:457-460(1979).
CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -1- FUNCTION: PHI also causes vasodilation.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC -1- SIMILARITY: Belongs to the glucagon family.
CC
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; AF503910; AM28152.1; -; mRNA.
CC HSPF; P18509; IGEA.
CC InterPro; IPR000532; Glucagon.
CC Pfam; PF00123; Hormone 2; 2.
CC PRINTS; PR00275; GLUCAGON.
CC SMART; SM00070; GLUCA; 2.
CC PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 25
FT PROPEP 26 79
FT PEPTIDE 81 107 Intestinal peptide PHI-27.
FT PROPEP 111 122
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide
FT group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide
FT group).
SQ SEQUENCE 170 AA; 19165 MW; 9C6AG049AF7BFF81 CRC64;

Query Match 95.8%; Score 138; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
    |||||
Db 125 HSDAVFTDNYTLRKQMKVKKYLSILN 152
    |||||

RESULT 12
VIP_HUMAN
ID -VIP HUMAN STANDARD; PRT; 170 AA.
AC P01282; Q96QK3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHI-42;
DE intestinal peptide PHM-27 (Peptide histidine methioninamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=VIP;
OS Homo sapiens (Human);
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominoidea;
OC Homo
OX NCBI_TaxID=9606;
RN [1]
RX NUCLEOTIDE SEQUENCE.
RP MEDLINE=83271523; PubMed=6571696;
RA Itoh N., Ohta K.-I., Yanai H., Okamoto H.;
RT "Human preprovasoactive intestinal polypeptide contains a novel PHI-
RT 27-like peptide, PHM-27.";
RL Nature 304:547-549 (1983).
RN [2]
RX NUCLEOTIDE SEQUENCE.
RP MEDLINE=88267775; PubMed=2839091;
RA Yamagami T., Ohsawa K., Nishizawa M., Inoue C., Gotoh E.,
RA Yanai H., Yanai H., Okamoto H.;
RT "Complete nucleotide sequence of human vasoactive intestinal
RT peptide/PHM-27 gene and its inducible promoter.";
RL Ann. N. Y. Acad. Sci. 527:87-102 (1988).
RN [3]
RX NUCLEOTIDE SEQUENCE.
RP MEDLINE=86004065; PubMed=3899557;
RA Takada T., Horovitch S.J., Montminy M.R., Mandel G., Goodman R.H.;
RT "Structure of the human vasoactive intestinal polypeptide gene.";
RL DNA 4:293-300 (1985).
RN [4]
RX NUCLEOTIDE SEQUENCE.
RP MEDLINE=87092456; PubMed=3025882;
RA Linder S., Barkhem T., Norberg A., Persson H., Schalling M.,
RA Hoekfelt T., Magnusson G.;
RT "Structure and expression of the gene encoding the vasoactive
RT intestinal peptide precursor.";
RL Proc. Natl. Acad. Sci. U.S.A. 84:605-609 (1987).
RN [5]
RX NUCLEOTIDE SEQUENCE.
RP MEDLINE=86016352; PubMed=2995945; DOI=10.1016/0196-9781(85)90016-6;
RA Delamarter J.F., Buell G.N., Kawashima E., Polak J.M., Bloom S.R.;
RT "Vasoactive intestinal peptide: expression of the prohormone in
RT bacterial cells.";
RL Peptides 6:95-102 (1985).
RN [6]
RX NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RP MEDLINE=22398257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Krausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Altschul S.F., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Udwin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
RA Rosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Viallon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Whiting M., Madan A., Kettner M., Madan A., Rodriguez S., Sanchez A.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield A.C., Krzywicki M.I., Skalska U., Smalley D.E.,
RA Scherch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
RN [7]
RX NUCLEOTIDE SEQUENCE OF 8-170.
RP MEDLINE=86313155; PubMed=3748844; DOI=10.1016/0196-9781(86)90156-7;
RA Gozes I., Bodner M., Shani Y., Fridkin M.;
RT "Structure and expression of the vasoactive intestinal peptide (VIP)
RT gene in a human tumor.";
RL Peptides 7:1-6 (1986).
RN [8]
RX NUCLEOTIDE SEQUENCE OF 50-170.
RP TISSUE=Pancratic carcinoma;
RC

RX MEDLINE=84066682; PubMed=6139527; DOI=10.1016/S0140-6736(83)91215-1;
RA Bloom S.R., Delamarter J.F., Kawashima E., Christofides N.D.,
RA Buell G., Polak J.M.;
RT "Diarrhoea in vipoma patients associated with cosecretion of a second
RT active peptide (peptide histidine isoleucine) explained by single
RT coding gene.";
RL Lancet 2:1163-1165 (1983).
RN [9]
RX NUCLEOTIDE SEQUENCE OF 78-155.
RP MEDLINE=87140054; PubMed=2434617;
RA Gozes I., Giladi E., Shani Y.;
RT "Vasoactive intestinal peptide gene: putative mechanism of information
RT storage at the RNA level.";
RL J. Neurochem. 47:1136-1141 (1987).
RN [10]
RX PROTEIN SEQUENCE OF 81-122.
RP MEDLINE=88007645; PubMed=3654650;
RA Yiangou Y., di Marzo V., Spokes R.A., Panico M., Morris H.R.,
RA Bloom S.R.;
RT "Isolation, characterization, and pharmacological actions of peptide
RT histidine valine 42, a novel prepro-vasoactive intestinal peptide-
RT derived peptide.";
RL J. Biol. Chem. 262:14010-14013 (1987).
RN [11]
RX PROTEIN SEQUENCE OF 127-152.
RP TISSUE=Pheochromocytoma;
RA MEDLINE=92287083; PubMed=1318039;
RA Kitamura K., Kangawa K., Kawamoto M., Ichiki Y., Matsuo H., Eto T.;
RT "Isolation and characterization of peptides which act on rat
RT platelets, from a pheochromocytoma.";
RL Biochem. Biophys. Res. Commun. 185:134-141 (1992).
RN [12]
RX STRUCTURE BY NMR OF VIP.
RP MEDLINE=9132343; PubMed=1863695;
RA Theriault Y., Boulanger Y., St Pierre S.;
RT "Structural determination of the vasoactive intestinal peptide by two-
RT dimensional H-NMR spectroscopy.";
RL Biopolymers 31:459-464 (1991).
RN CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHM and PHV also cause vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR EMBL; L00157; AAA61289.1; -; Genomic DNA.
DR EMBL; L00154; AAA61289.1; JOINED; Genomic DNA.
DR EMBL; L00155; AAA61289.1; JOINED; Genomic DNA.
DR EMBL; L00156; AAA61289.1; JOINED; Genomic DNA.
DR EMBL; M33027; AAA69515.1; -; Genomic DNA.
DR EMBL; M11553; AAA61284.1; -; Genomic DNA.
DR EMBL; M11549; AAA61284.1; JOINED; Genomic DNA.
DR EMBL; M11550; AAA61284.1; JOINED; Genomic DNA.
DR EMBL; M11551; AAA61284.1; JOINED; Genomic DNA.
DR EMBL; M11552; AAA61284.1; JOINED; Genomic DNA.
DR EMBL; M14623; AAA61288.1; -; Genomic DNA.
DR EMBL; M14619; AAA61288.1; JOINED; Genomic DNA.
DR EMBL; M14620; AAA61288.1; JOINED; Genomic DNA.
DR EMBL; M14621; AAA61288.1; JOINED; Genomic DNA.
DR EMBL; M14622; AAA61288.1; JOINED; Genomic DNA.
DR EMBL; M36510; AAA61286.1; -; Genomic DNA.
DR EMBL; M36606; AAA61286.1; JOINED; Genomic DNA.
DR EMBL; M36607; AAA61286.1; JOINED; Genomic DNA.
DR EMBL; M36608; AAA61286.1; JOINED; Genomic DNA.
DR EMBL; M36609; AAA61286.1; JOINED; Genomic DNA.
DR EMBL; BC009794; AA09794.1; -; mRNA.
DR EMBL; M36634; AAA61287.1; -; mRNA.

DR EMBL; M54930; AAA63268.1; -; mRNA.
 DR EMBL; M32162; AAA61285.1; -; Genomic DNA.
 DR EMBL; M31645; AAA61285.1; JOINED; Genomic DNA.
 DR PIR; A23296; VRHU.
 DR HSSP; P18509; IGEA.
 DR Ensembl; ENSG00000146469; Homo sapiens.
 DR HGNC; HGNC:12693; VIP.
 DR H-InVDB; HIX0006306; -.
 DR MIM; 192320; -.
 DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
 DR GO; GO:0007589; P:fluid secretion; TAS.
 DR GO; GO:0007186; P:G-protein coupled receptor protein signalin...; TAS.
 DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone_2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 KW Amidation: Cleavage on pair of basic residues;
 KW Direct protein sequencing; Glucagon family; Hormone; Signal.
 FT SIGNAL 1 20 Potential.
 FT PROPEP 21 79
 FT PEPTIDE 81 122
 FT PEPTIDE 81 107
 FT PEPTIDE 125 152
 FT PROPEP 156 170
 FT MOD_RES 107 107
 FT MOD_RES 152 152
 FT CONFLICT 96 97 Qu -> PP (in Ref. 7).
 FT CONFLICT 113 113 Missing (in Ref. 6).
 FT CONFLICT 116 116 S -> L (in Ref. 4).
 FT CONFLICT 136 136 R -> G (in Ref. 4).
 SQ SEQUENCE 170 AA; 19169 MW; 938C0177F89508FD CRC64;
 Query Match 95.8%; Score 138; DB 1; Length 170;
 Best Local Similarity 96.4%; Pred. No. 8.4e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Oy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
 Db 125 HSDAVFTDNYTLRKQMAVKYLSILN 152
 RESULT 13
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 ID_VIP_MOUSE STANDARD; PRT; 170 AA.
 AC P32648;
 DT 01-OCT-1993 (Rel. 27, Created)
 DT 01-OCT-1993 (Rel. 27, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
 DE Intestinal peptide PHI-27 (Peptide histidine isoleucinamide 27);
 DE vasoactive intestinal peptide (VIP) (Vasoactive intestinal
 DE polypeptide)].
 DE Name=VIP;
 GN Mus musculus (Mouse).
 OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
 OC Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
 RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
 RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
 RT "Characterization of the gene and messages for vasoactive intestinal
 RT polypeptide (VIP) in rat and mouse."
 RL Brain Res. Mol. Brain Res. 9:217-231(1991).
 RN [2]
 RP NUCLEOTIDE SEQUENCE OF 1-36
 RC STRAIN=C57BL/6; TISSUE=Spleen;
 RX MEDLINE=95201289; PubMed=7894056;
 RA Sena M., Bravo D.T., Agoston D., Waschek J.A.;

RT "High conservation of upstream regulatory sequences on the human and
 RT mouse vasoactive intestinal peptide (VIP) genes."
 RL DNA Seq. 5:25-29(1994).
 CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycogenolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -1- FUNCTION: PHM also causes vasodilation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the glucagon family.
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration
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 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC EMBL; X74297; CAA52350.1; -; Genomic DNA.
 DR PIR; A60037; A60037.
 DR HSSP; P18509; IGEA.
 DR Ensembl; ENSMUSG00000019772; Mus musculus.
 DR MGI; MGI:98933; Vip.
 DR GO; GO:0005615; C:extracellular space; TAS.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone_2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 KW Amidation: Cleavage on pair of basic residues; Glucagon family;
 KW Glycoprotein; Hormone; Signal.
 FT SIGNAL 1 21 By similarity.
 FT PROPEP 22 79
 FT PEPTIDE 81 122
 FT PEPTIDE 81 107 Intestinal peptide PHI-42 (By
 FT PEPTIDE 125 152 similarity).
 FT PROPEP 156 170 Intestinal peptide PHI-27.
 FT MOD_RES 107 107 Vasoactive intestinal peptide.
 FT MOD_RES 152 152 Isoleucine amide (G-108 provides amide
 FT MOD_RES 152 152 group).
 FT CARBOHYD 133 133 Asparagine amide (G-153 provides amide
 FT SEQUENCE 170 AA; 19049 MW; 0164C831F8F5C73D CRC64; group).
 N-linked (GlcNAc...) (Potential).
 Query Match 95.8%; Score 138; DB 1; Length 170;
 Best Local Similarity 96.4%; Pred. No. 8.4e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Oy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
 Db 125 HSDAVFTDNYTLRKQMAVKYLSILN 152
 RESULT 14
 VIP_RAT
 ID_VIP_RAT STANDARD; PRT; 170 AA.
 AC P01283;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 01-OCT-1993 (Rel. 27, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
 DE Intestinal peptide PHI-27 (Peptide histidine isoleucinamide 27);
 DE vasoactive intestinal peptide (VIP) (Vasoactive intestinal
 DE polypeptide)].
 DE Name=Vip;
 GN Rattus norvegicus (Rat).
 OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
 OC Muridae; Murinae; Rattus.
 OX NCBI_TaxID=10116;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
 RX MEDLINE=90244869; PubMed=2159586; DOI=10.1016/0169-328X(90)90036-D;
 RA Giladi E., Shani Y., Gozes I.;
 RT "The complete structure of the rat VIP gene.";

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RL Brain Res. Mol. Brain Res. 7:261-267(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 9-170.
RC TISSUE=Brain cortex;
RA MEDLINE=85154612; PubMed=3838518; DOI=10.1016/0014-5793(85)80953-4;
RX Nishizawa M., Hayakawa Y., Yanaiharu N., Okamoto H.;
RT "Nucleotide sequence divergence and functional constraint in VIP
precursor mRNA evolution between human and rat.";
RL FEBS Lett. 183:55-59(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-1;
RA Lampertti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [4]
RP PROTEIN SEQUENCE OF 134-152.
RX MEDLINE=88243784; PubMed=3379062;
RA Goetzl E.J., Sreedharan S.P., Turck C.W.;
RT "Structurally distinctive vasoactive intestinal peptides from rat
basophilic leukemia cells.";
RL J. Biol. Chem. 263:9083-9086(1988).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
stimulates myocardial contractility, increases glycohemolysis and
relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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removed.
CC -----
DR EMBL; X02341; CAA26200.1; -; mRNA.
DR PIR; A60053; VRRT.
DR HSP; P18509; LGEA.
DR Ensembl; ENSRNOG0000018808; Rattus norvegicus.
DR RGD; 621647; Vip.
DR GO; GO:0042311; P:vasodilation; NAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;
KW Signal.
FT SIGNAL 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT Intestinal peptide PHV-42 (By
FT similarity).
FT PEPTIDE 81 107
FT Intestinal peptide PHR-27.
FT PEPTIDE 125 152
FT Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107
FT Isoleucine amide (G-108 provides amide
FT group).
FT MOD_RES 152 152
FT Asparagine amide (G-153 provides amide
FT group).
FT CARBOHYD 68 68
FT N-linked (GlcNAc...) (Potential).
FT CARBOHYD 133 133
FT N-linked (GlcNAc...) (Potential).
SQ SEQUENCE 170 AA; 19079 MW; 202AE82EBBD190B CRC64;

Query Match 95.8%; Score 138; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNTYRLRKQMKVKKYLSILN 28
DB 125 HSDAVFTDNTYRLRKQMKVKKYLSILN 152

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Job time : 76 secs
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DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-001;
OS Homo sapiens (Human),
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN (1)
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CAI21764.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 170 AA; 19168 MW; 93EC0177F89508FD CRC64;

Query Match 95.8%; Score 138; DB 2; Length 170;
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Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNTYRLRKQMKVKKYLSILN 28
DB 125 HSDAVFTDNTYRLRKQMKVKKYLSILN 152

Search completed: January 25, 2006, 15:18:40
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